THE BRITISH PTERIDOLOGICAL SOCIETY

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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and is still a focus for fern enthusiasts, its wide membership including gardeners, nurserymen and botanists, both amateur and professional. It provides a wide range of information about ferns through its publications and website, and also organises formal and informal indoor meetings, field meetings, garden visits, a plant exchange, a spore exchange and fern book sales. The Society's journals, *The Fern Gazette*, *Pteridologist* and *Bulletin*, are published annually. *The Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist*, topics of more general appeal, and the *Bulletin*, Society business and meetings reports. **Website: www.eBPS.org.uk**

Membership is open to all interested in ferns and lycophytes. **SUBSCRIPTION RATES** (due on 1st January each year) are Full Personal Members £20, Personal Members not receiving *The Fern Gazette* £16, Student Members £10, Subscribing Institutions £33. Family membership in any category is an additional £2. Applications for membership should be sent to the Membership Secretary (address above) from whom further details can be obtained. (Remittances in currencies other than Sterling are £5 extra to cover bank conversion charges.) **Airmail** postage for all journals is an extra £4, or for those not receiving *The Fern Gazette* £2.50. **Standing Order** forms are available from the Membership Secretary and the BPS website.

(**Front cover**: *Asplenium platyneuron*. Illustration from: J.K. Small (1938) *Ferns of the Southeastern States*.)

Back numbers of *The Fern Gazette*, *Pteridologist* and *Bulletin* are available for purchase from P.J. Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ; E-mail: BackNumbers@eBPS.org.uk

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THE

BULLETIN

OF THE

BRITISH PTERIDOLOGICAL SOCIETY

Vol. 6 2007 No. 6

RETIRING PRESIDENT'S ADDRESS
'Discovering the Forgotten Generations'

A.F. Dyer

(Presented before the AGM at RBGE, 24 March 2007.)

I come to my last day as President with a mixture of sadness and relief. Sadness, because being President has been an honour and a pleasure and it has now come to an end; it was a real pleasure to have the opportunity to join a group of people giving their time and skills for the benefit of the Society and to be in touch with many of the Society's activities. At the same time I feel relief because the Presidency was a considerable responsibility, which I can now hand over. I would like to thank the Officers, Appointees and Elected Committee Members for their support and guidance. Together, I believe we have been able to build on the strong foundation that I inherited.

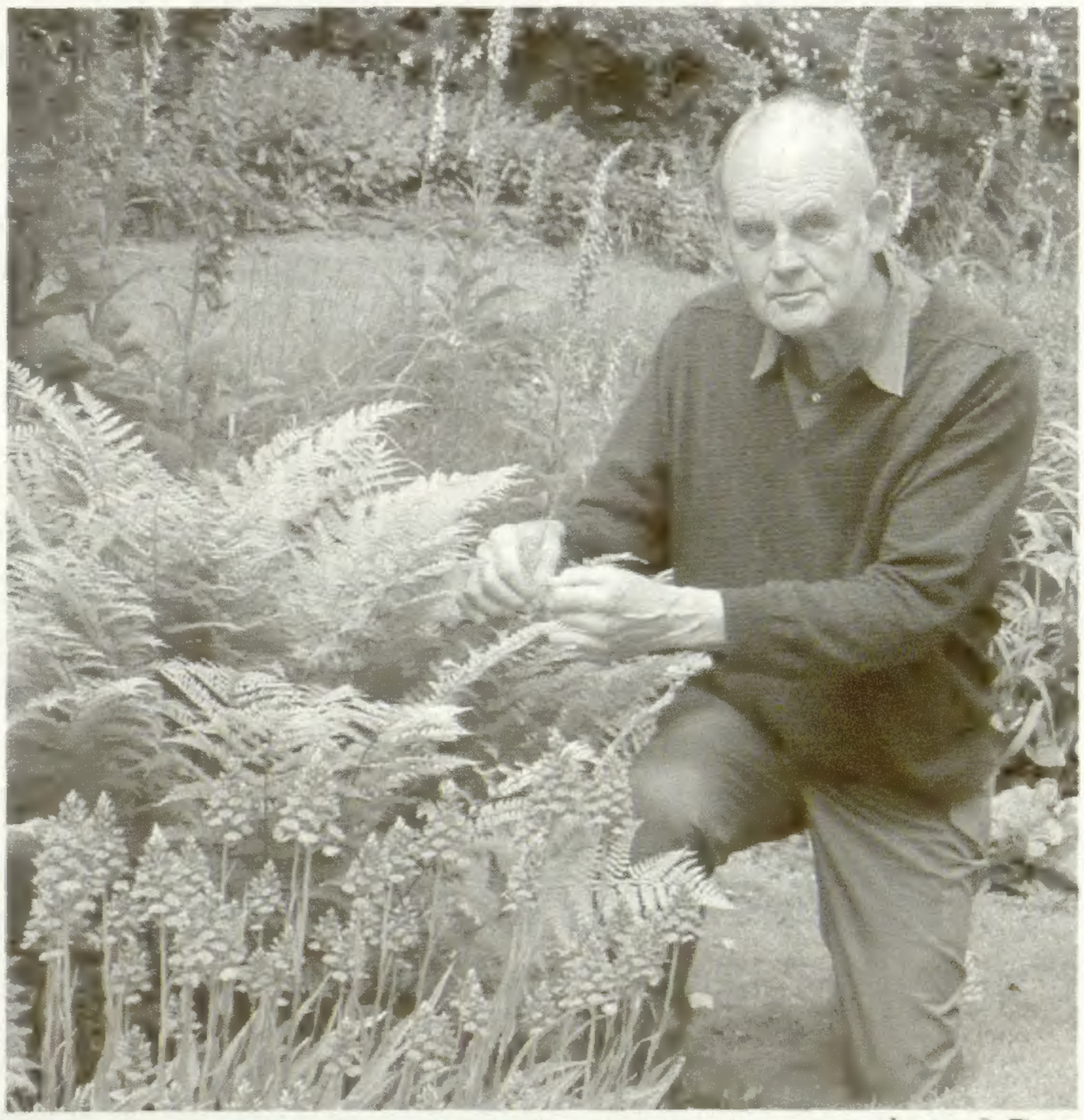

photo: J. Dyer

Adrian Dyer in his garden

Looking back over the last three years, I found myself wondering how I got to this position. Previous Presidents have described how they came, at a young age, to be interested in pteridophytes, and usually how one person was particularly influential in setting them on that path. My conversion was late, slow and unguided. Nobody I knew during my childhood had any interest in natural history and I did not study biology at school until 'A' Level. Despite this, an interest in plants developed and I graduated with a Botany Honours degree

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Editorial note: In this *Bulletin* the nomenclature of the *Dryopteris affinis* group follows Fraser-Jenkins 2007, *Fern Gazette* 18(1): 1-26: *D. affinis* subsp. *affinis*, *D. affinis* subsp. *paleaceolobata*, *D. borreri*, *D. cambrensis*, *D.* × *complexa*, *D.* × *critica*, *D.* × *convoluta*, etc.

at Newcastle, then part of Durham University. In the 1950s, interest in ferns was at a very low ebb, both academically and horticulturally, and I graduated having had no exposure to pteridophytes apart from a catalogue of names and dates of fossils that made me vow never to get involved with the group again.

Chromosomes caught my attention and I decided to do a PhD in cytogenetics, and investigated the chromosomes of *Trillium* and several other genera for my D Phil at Oxford. So it was as a cyto-geneticist that I joined the staff of the Botany Department of Edinburgh University in 1960 and I taught about chromosomes amongst other things for the next 44 years. Also in the 1970s, I produced a variety of teaching kits for schools, including sets of photographs of nuclear division (which are still selling 30 years later), slides of angiosperm reproduction, a pollen germination kit, a chromosome preparation kit – and a fern gametophyte culture kit together with an explanatory booklet. Over the years, I worked with research students on projects of potential value in crop breeding, such as the creation of hybrids between wheat and rye, and of *Brassica* species.

My first contact with living ferns was when I chose fern gametophytes as experimental material to study cell division in relation to differentiation and chloroplast replication. Gametophytes are very good laboratory material: easy to culture in large numbers, their plasticity in response to environmental factors makes them easy to manipulate. After trying several species, I chose one that produced uniform cultures; indeed, the cultures were so uniform that early divisions were synchronous. Later I discovered it was apogamous and diplosporous, so had genetically identical spores. Later still I discovered that the fern was *Dryopteris pseudo-mas*, now called *D. affinis*. This marked the beginning of a love-hate relationship with *D. affinis* that continues today. A quote from Lin Dunbar's book *Ferns of the Coastal Plain* (Univ. of South Carolina Press, Columbia) comes to mind. Referring to old myths about ferns, she states: "*long ago, ... those who spoiled a fern plant would live the rest of their days with a confused mind*". That is certainly how I feel about *D. affinis* after having spoiled it to study its gametophytes!

This work gradually led to an interest in gametophytes in their own right, and the gametophyte generation in the wild in particular. This required me to learn to recognise the British fern species, which I did initially with guidance from Chris Page at RBGE. I started teaching undergraduates and MSc students about ferns as well as about chromosomes, learning a lot more about fern biology in the process. In the early 1980s, I initiated an international symposium at RBGE on fern biology, which was sponsored by the BPS, together with the Royal Society of Edinburgh and the Linnean Society. This was my first contact with the BPS, which I then joined. This collaboration resulted in a successful conference, with 120 participants from over 20 countries, including some of the great names in pteridology and I made many new pteridological friends.

I am still a beginner at fern identification and will never be a taxonomist. I enjoy seeing ferns in the wild and have happy memories of excursions in Britain to see 'Ferny combes', unusual habitats and rarities, as well as of trips abroad. However, looking at ferns in the wild doesn't make me a field botanist. I enjoy the challenge presented by fern photography but I haven't mastered the art yet. I grow ferns in my garden as space fillers or as specimen individuals, including a few cultivars. But I am no horticulturalist. I collect fern books but several members have more comprehensive libraries. I have accumulated some other fern collectibles, old and new, including engraved glass and various pots and prints, but I have no significant collections.

However, within this butterfly-minded approach to pteridology, my interest in fern biology continued, and I soon found out that for many pteridologists, the gametophyte didn't really exist. *Fern* taxonomy, *fern* ecology, *fern* anatomy and development, invariably meant *sporophyte* taxonomy, *sporophyte* ecology and *sporophyte* anatomy and development. The gametophyte was a *forgotten generation*, and I had discovered it, not in the sense that I was the first, but as a personal revelation, hence the title of my talk *Discovering the forgotten generations*.

What makes gametophytes so interesting? In a nutshell, it is because this generation is responsible for most of the critical events in reproduction: dispersal, establishment (which determines where new individuals will grow) and the breeding system (which determines whether they are cross-fertilised or self-fertilised).

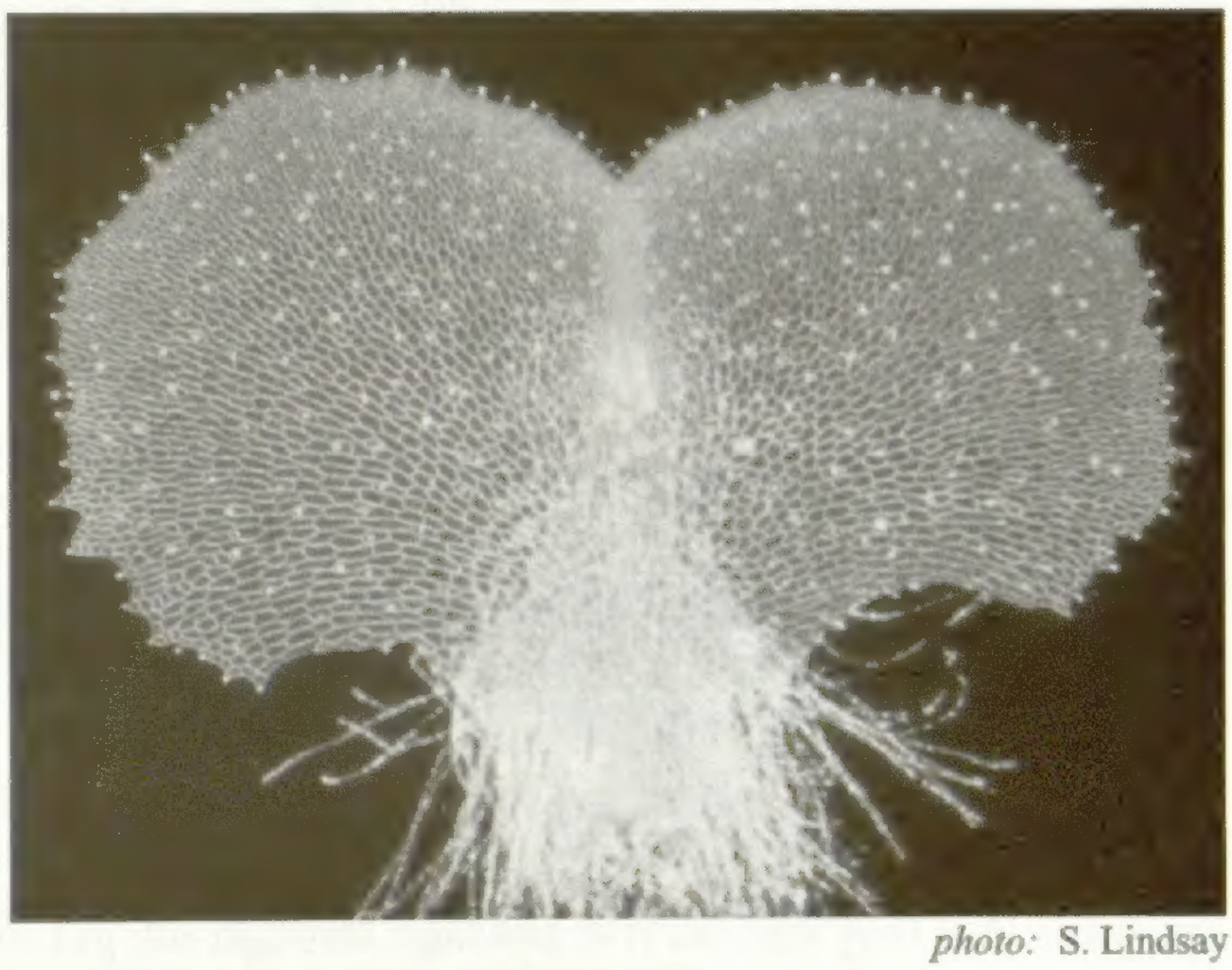

photo: S. Lindsay

A mature fern gametophyte

The mature gametophytes of most species are of the classic text-book form of a more-or-less heart-shaped green thalloid structure. Each wing is mostly one cell thick, made up of green photosynthetic cells. Attached at the base are colourless unicellular rhizoids for anchorage and absorption of dissolved minerals. Eventually, sex organs may also occur. Some species also have glandular hairs or trichomes, and the presence or absence of these is one character that can be used to distinguish species as well as trichome shape, size and number, cell size and prothallus habit. Although these differences exist, they haven't been used to create a gametophyte taxonomy, even for the small British flora, and until gametophyte identification keys exist, studies of reproductive biology in the wild will always be incomplete.

Gametophyte development follows a predictable sequence, though there are minor differences between species. A short filamentous phase soon gives way to two-dimensional growth as a result of a reorientation of cell division when there is sufficient blue light. This response is mediated by a pigment located near the tip of the apical cell. If the tip is covered by something that excludes blue light, such as the misplaced brown spore wall, the transition to two-dimensional growth is prevented. In red light, this filamentous growth may continue almost indefinitely. This will prevent development of archegonia, which can only form on the central cushion of prothalli, but does not prevent antheridium production. Thus a gametophyte in near-darkness will grow as an elongated filament towards any source of light (positively phototropic) but if and when the intensity of the light shining on the tip increases, normal development will be initiated. Perhaps this occurs when spores germinate under soil particles near the surface.

In the wild, gametophytes are restricted to certain micro-habitats and are small and not very competitive. Not all species require the same natural conditions to develop to maturity and produce sporelings. Some, such as *Asplenium scolopendrium*, can be found on the surface of exposed soil and porous rocks but on rotten wood the one most likely to be found is *Dryopteris dilatata*. This raises an interesting question: is it the gametophyte, the sporophyte, or both, that determines whether a species is terrestrial or epiphytic, calcifuge or calcicole? Does the gametophyte play a part in restricting a species to a certain type of habitat?

Fascinating though all this is, arguably the most remarkable stage of the gametophyte generation is the first one, the spore. Spores have been fulfilling their essential role in the fern life-cycle for over 300 million years. The fern spore is less than a tenth of a millimetre across, but carries all the developmental potential for both the gametophyte and the sporophyte within its single nucleus. In this compact form, spore dispersal can carry the species tens, hundreds or even thousands of miles to new localities.

While it is widely recognised that long distance spore dispersal is possible, there is a common misconception that most spores fall close to the source, based on spore-trapping investigations such as one by Peter Glaves (unpublished PhD thesis) on *D. dilatata*, which showed the density of spores deposited at distances up to ten metres either side of a single source plant. About 90 per cent of the *recorded* spores fell within two metres. However, no-one has compared local deposition with total spore output to see what proportion escaped beyond the sample area. Such an investigation has been done with mosses (*J. Bryol.* 17: 355-368. 1992) and although the scale is slightly different, the deposition curves were very similar. However, more than 90 per cent of the total number of spores produced escaped beyond the four-metre diameter trapping area. We should keep this example in mind when reviewing the evidence for ferns.

One of the more obvious features of spores is that they vary in volume, shape and surface sculpturing of the thick protective wall. Differences exist between genera or even species, making spore morphology an important taxonomic character, but this variation must also have adaptive implications. Whatever the primary function of these differences, they are likely to affect spore aerodynamics, and thus dispersal potential, but there has been little study of this. Most spores are very durable and can tolerate a variety of environmental extremes such as drought and low and high temperature for considerable periods. Less well known is that they can survive passage through the gut of earthworms. Most spores have the potential to survive for several years or even decades. The optimum conditions for survival require further investigation, but it is known that storage at low temperature prolongs viability. More surprising perhaps is the fact that in at least some species spores remain viable for longer if they are stored moist, and fully imbibed. For example, spores of *Blechnum spicant* are all dead in about a year stored dry at 20°C; stored moist, there is no change in viability even after two years. Another characteristic of spores is their sophisticated control of dormancy. Spores are dormant when released. To break the dormancy and induce germination, water and, in most species, light are required in addition to a suitable temperature, usually between 10°C and 25°C.

This combination of durability, longevity and dormancy in darkness results in the formation of soil spore banks – reservoirs of live but dormant spores buried in the soil. In Britain, most species form soil spore banks, and most soils contain viable spores, to a depth of over one metre in some sites. Their presence can be demonstrated by culturing soil samples in the light. Before 1990, it was not generally accepted that such spore banks existed. If I have made any contribution to pteridology, it is that, with Stuart Lindsay, I played a major role in establishing the idea that for many, perhaps most, ferns, a soil spore bank is an important part of their reproductive strategy. Along the way, we demonstrated that at least eight of Britain's rarer ferns, including *Woodsia ilvensis*, produced soil spore banks, which could be used as a source for establishing *ex situ* conservation collections. A subsequent research project was entirely focussed on *W. ilvensis* and this work later contributed to the conservation action plan for *W. ilvensis* now directed by Heather McHaffie at RBGE.

So, I hope it is clear from this very brief outline why I consider that spores are so remarkable. To use the popular vernacular, spores are 'magic'!

As readers of the *Pteridologist* will know (see Vol. 4, pt 5; 2006), there are long-established myths that spores do indeed have magic properties. Most often the species implicated is bracken. The magical property most often attributed to spores is the ability to induce invisibility if collected at midnight on St John's Eve (23 June). According to folk-lore, if the spores are collected in the right way and then placed in a shoe, the wearer becomes invisible.

I have travelled a path that has led me first to an interest in plants, and then to ferns, and thus to standing here today. This brings me back to wondering how other people get interested in ferns and in the BPS. Perhaps there has to be an inborn inclination, but

certainly there needs also to be an external influence, perhaps an individual or a group of people who can foster the interest. This is relevant in relation to the future role, and indeed existence, of the BPS.

Pteridology now hardly exists in school syllabuses and there are few universities or colleges where pteridophytes are given more than a cursory mention. I have recently been advising a school close to home on some sixth year projects and suggested some investigations using ferns. I find that teachers have no knowledge of pteridophytes and if they did once learn the fern life-cycle at school, they can't remember it. To make once more the link with my title, the teachers are a 'forgotten generation' in relation to pteridology, and there are other 'forgotten generations' following behind in the children they teach.

What are the implications of this for pteridology and for the BPS? There is already a lack of research into fern biology, and no signs of recovery. There are a few institutions, including the NHM and RBGE, where research continues into fern taxonomy, phylogeny and, to a lesser extent, conservation and breeding systems, but even if these opportunities for employment are maintained, where are the postgraduates with an interest in, and knowledge of, ferns going to come from when new staff recruits are needed? Who will stimulate interest in ferns and provide answers to questions from the public if staff at museums, wildlife reserves and information centres have no knowledge of the group?

The responsibility for carrying the banner for pteridology in the UK rests squarely with the BPS. We need to cater not only for the broad range of interests of our members, which we already do very well, but also for the wider public. We must promote the subject, speak out on behalf of ferns, and through personal contact, publications and most particularly the website, provide the main source of information for those members of the public who have questions about them. In taking on this educational role, a service to the public as befits a registered charity, we must remember schools and colleges as well as adult enthusiasts. We have a particular responsibility towards the British flora, but we must also provide more general information at an introductory level. Perhaps some *Pteridologist* articles should have a more overtly educational role, in part aimed at schools and colleges.

At the same time, we have to do what we can to add to the existing knowledge of the natural history of ferns. An important aspect of this is detailed and accurate recording of what ferns we have in Britain, where they are and how the populations are changing. But our contribution need not be limited to recording; it should also include investigations of other aspects of fern biology. Our knowledge of ferns lags well behind that of flowering plants and while large research projects involving expensive technology are beyond our capabilities, there are things we could do in the way of small investigations that would add significantly to our understanding of the lives of our British species. One of the strengths of the BPS has been the mix of professional career pteridologists and keen and knowledgeable amateur members but the supply of professionals is dwindling and, increasingly, the responsibility for interacting with the wider public must be taken by the rest of the membership. As a relatively small society our ambitions must be tailored to our capabilities, but that does not mean that we can do nothing. A small contribution is better than none.

To encourage investigations by members, we need workshops to pass on the necessary botanical and investigatory skills, and funds to provide modest financial assistance. Our existing funds are currently under-used, but they would soon run out if we had a significant programme of projects; we need to explore the possibilities of sponsorship.

The major restriction on what we can achieve is our relatively small membership. Opportunities for volunteers to become involved in monitoring and practical conservation at working meetings have been a big factor in the remarkable expansion of organisations such as Plant Life International over the last ten years. I don't see why this expansion couldn't

happen also at a more modest level for the BPS. The subtle attraction of ferns will always escape all but a discerning minority but a publicised programme of targeted recording, population monitoring, phenological studies, and active conservation (and by conservation I mean reversing adverse human impact) might prove to be a way of stimulating an increase in membership and in turn enable us to expand our activities without neglecting the needs of other members, particularly the fern growers. This is a good time for natural history organisations provided they have a recognisable purpose, and ferns now probably have a higher public profile than at any time in the last 100 years. We need to take advantage of this.

My vision for the future of the BPS is an outward-looking organisation that caters for its members' needs but is also known as the first port of call for anyone seeking information about pteridophytes. At the same time it has a modest programme of working meetings, investigations and other activities, co-ordinated by the Project Officer and partially funded by the Society, to add to our knowledge of the plants. Where appropriate, as in recording and conservation, these would be conducted in close cooperation with other organisations such as the BSBI and Plant Life International. We already have the publications to make the new information widely available. It would take some years to achieve this objective, and would require a major commitment by some members, but it is not an impossible ambition. I know that some members enjoy a relatively passive involvement with the Society, as I do in other societies, but I am sure that there are sufficient numbers who with support and encouragement could join in the efforts to go at least part way towards making this vision a reality, especially if these activities lead to an increase in membership. Meanwhile, we must encourage any demonstration of interest in ferns.

However, I no longer have a major say in the future of the BPS, because today I hand over my Presidential responsibilities. I whole-heartedly endorse the Committee's nomination of Robert Sykes, a long-time active member, friend and supporter of the Society, as my successor. You also have an excellent team on the present Committee. The Society has a promising future.

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photo: courtesy A. Leonard

Alpes Maritimes, France

Andrew Leonard, Patrick Acock, Sébastien Sant, Paul Ripley,
Michael Hayward, David & Avril Walkinshaw

NATIONAL FIELD MEETINGS

ALPES MARITIMES, SOUTH FRANCE – 3-7 August

(Leader: Sébastien Sant) **Paul Ripley *et al.***

Pat Acock, Andrew Leonard and Paul Ripley met Sébastien Sant on Wednesday August 1st for some reconnaissance. Sébastien was born and bred in Nice and knows the Alpes Maritimes extremely well. Not only does he know his ferns, but he is also a highly knowledgeable general botanist and naturalist. We were extremely fortunate to have such an able guide who generously gave us his expertise and time for the whole trip.

Friday 3rd August (Paul Ripley)

In the morning we visited a 'vallon obscur' (shady gorge), the Vallon de la Madeleine (Ravin des Vallières in the Commune de Colomars) just inland from Nice. Brief mention of this site will be made in Tuesday's report when a similar site was seen.

After collecting Michael Hayward and David and Avril Walkinshaw from Nice airport, our party, now complete, stopped barely one kilometre from the airport, at the Centre Commercial CAP 3000, St Laurent du Var. The unprepossessing site, close to a retail park, was the estuary of the Var. The Mediterranean is scarcely tidal, but the river estuary must flood in times of peak rainfall. In the sandy reed beds of the estuary, close to the retaining wall, we found *Equisetum ramosissimum* and *E.* × *font-queri*, with its parents, *E. telmateia* and *E. palustre*. *E.* × *meridionale* (*E. ramosissimum* × *E. variegatum*) has apparently also been reported here by Rémy Prelli.

Moving on, we took La Moyenne Corniche westwards out of Nice, stopping beyond Cap Ferrat, just before the town of Éze in an attempt to see *Asplenium petrarchae*. The effects of the preceding dry weather in this region would dominate the appearance of the ferns we saw during the meeting, and in this case the plants were completely dried out. We made a brief stop near the Cap d'Ail to see a large clump of *Pteris vittata*, before seeing it with somewhat more ease above the Principality of Monaco (and with stunning views thereof).

Finally we took the autoroute towards Menton, turning off northwards near Menton for the road that follows the Roya river into the mountains. North of Breil-sur-Roya, a few yards up the turning for Berghe, we stopped to see a superb stand of *Pteris cretica*.

We arrived at 'Neige et Merveilles', our hostel for the week (a former lead-mining camp), 15 minutes hard uphill walk from the road, and accessible only by 4-wd vehicle. One certainly kept fit moving between the dining room/bar and one's bedroom, but the food was excellent value and the position magnificent. The wine was cheap but that is enough said.

Saturday 4th August (Pat Acock)

We were joined for the morning by the local ranger, Jean-Marie Cevasco, who had come to meet a group of naturalists from the Hungarian Academy and had a wide knowledge of all aspects of the flora and fauna. We set off up a rough track above our hostel. Very quickly the number of ferns on our list grew. Rarities for the area included *Huperzia selago*, *Polystichum aculeatum*, *Phegopteris connectilis* and *Dryopteris cambrensis*, and among the commoner ferns were *D. filix-mas*, *Polystichum lonchitis*, *Gymnocarpium dryopteris* and *Athyrium filix-femina*. Further up on a bank we came across one plant of the hybrid *Polystichum* × *illyricum*. (Not far down the valley was the statue of Sir Clarence Bicknell, an English botanist who spent many years studying this region and after whom *P.* × *bicknellii* was named.) After a little climb just outside the national park we were taken off the main trail to see *Cystopteris montana*. A bit further up we were to see a few more fronds of it on the edge of the trail, which is where Sébastien had first discovered it in the Roya Valley.

Still higher up, *Dryopteris expansa* became more common along with *Athyrium distentifolium*. After lunch, while most of the group was revelling in the discovery of *Selaginella selaginoides*, Andrew spotted a marmot resting on a rock below us. After a brief stop for refreshments at a refuge, four members set off back for the hostel as by now the sun was very hot and the trail became ever more rugged. We had hoped to be rewarded for continuing our journey by a *Woodsia* or two. Unfortunately these eluded us but we were compensated by finding a new (for Sébastien) site for *Phegopteris connectilis*, and being shown some of the ancient rock carvings dating from 4,000 to 1,500 BC. These were chiselled into the flat red surface of rocks and depicted spears and animals and strange symbols. Throughout the region there are reckoned to be over 40,000 of these carvings, which were only discovered relatively recently.

Returning a slightly different way we were rewarded by a completely different vista with alpine meadows dominated by many species of umbellifers. Early on we were shown *Equisetum palustre* and in a lake just above the hostel Paul found *E. ramosissimum*. At the lake edge and into the water we found the colony of *E. variegatum* that Sébastien had promised us.

Sunday 5th August (Andrew Leonard)

After an early breakfast we were delighted to see two Range-Rovers turn up at 8a.m. to take us into the mountains. Neither had a roof, which turned out to be a mixed blessing as we were going to spend the next ten hours driving along bumpy and dusty unmade roads, with no protection from the very hot sun.

After a drive through many beautiful valleys we arrived at 10.30 for our first stop, over the border in Italy between Cime du Bec roux and Cime du Bec. The main group walked down to a lake to see *Selaginella selaginoides*. I decided to do a less arduous walk to a nearby scree slope to catch my first sight of *Dryopteris villarii*. Also in the scree *D. filix-mas*, *D. cambrensis*, *Polystichum lonchitis*, *Asplenium septentrionale* and *Athyrium distentifolium* could be found. I understand the main group failed to see the promised clubmoss, but instead saw *Botrychium lunaria*. On the return trip and above and along the road were seen *Huperzia selago*, *Dryopteris expansa*, *Cryptogramma crispa* and *Asplenium septentrionale*.

photo: P.J. Acock

Asplenium* × *lessinense
in Alpes Maritimes, France

After an hour we returned to the vehicles and drove for another half-hour to the Marguareis area of karstic limestone. Along the road at and above 2,100 metres we began to see *Asplenium fissum*, which is only known from this region. We stopped to look at the roadside rock-walls and were delighted to be shown the very rare hybrid between *A. fissum* and *A. viride*, *A.* × *lessinense*. This was a small but spectacular fern, looking nothing like either parent. It had been found some time ago by Rémy Prelli and Jean-Louis Polidori and confirmed as the hybrid. We spent about half an hour here, finding *A. fissum*, *A. viride*, *A. ruta-muraria* subsp. *ruta-muraria*, *Cystopteris fragilis* and *C. alpina*. There had not been rain in the south of France for two months and many ferns were suffering badly from the drought.

We then drove a short way for lunch and an hour of individual fern-hunting. In this

area could be found *Asplenium fissum*, *A. viride*, *A. trichomanes*, *A. ruta-muraria* subsp. *ruta-muraria*, *Cystopteris fragilis*, *Dryopteris villarii*, *D. filix-mas*, *Polystichum lonchitis*, *Athyrium distentifolium*, *A. filix-femina*, *Gymnocarpium robertianum* and one very small plant of *Botrychium lunaria*. Despite the drought, *A. fissum* was particularly fine here.

At 2p.m. we began the four-hour drive back through many unremarkable valleys. Temporary respite came when one of the Range-Rovers broke down; unable to mend the vehicle, our driver rang for a replacement, which took us back to our hotel for a welcome drink and a shower before dinner.

Monday 6th August (Michael Hayward)

On our morning walk to the cars we left the piste to explore the adjacent river bed. There were stands of *Equisetum hyemale* and *Dryopteris cambrensis* shaded by large boulders and bushes. In more open sections were delightful carpets of *Asplenium septentrionale*. Back on the piste, *A. trichomanes* and *Polypodium vulgare* were common and a few very dehydrated *Asplenium ceterach* were found.

Next we travelled towards the coast to the mediaeval town of Saorge, with its tall bell towers, precariously perched on a rock spur jutting into the Roya Valley. Sébastien disappeared into a small cave by the ancient public washing house, emerging with a rather dazed but very photogenic salamander, which was no doubt glad to be returned to its black hole. After coffee in the town square we descended past the monastery and drove two kilometres east in the Bendola Valley to the Pont de Castou where we ate our lunch on the river bank with brightly coloured damsel flies for company. After lunch we started to climb upwards, following the river through mostly deciduous woodland where ferns were abundant; finds included *Dryopteris filix-mas*, *Polypodium vulgare*, *Asplenium trichomanes*, *A. ruta-muraria* subsp. *dolomiticum*, *A. foreziense*, *A. fontanum* and *Adiantum capillus-veneris*. *Polystichum aculeatum* and *P. setiferum* were found, the latter becoming more common and larger as we climbed higher, searching for a known plant of their hybrid, *P* × *bicknellii*, which was still surviving despite the use of strimmers on the path edge.

We then drove inland through the town of La Brigue, following the river Levenza to the Chapel of Notre Dame des Fontaines with its 15th-century wall paintings. Some of us chose to explore the chapel but the majority who descended the steep banks of the river found *Gymnocarpium robertianum*, *Cystopteris fragilis*, *Asplenium trichomanes* subsp. *quadrivalens* and possibly subsp. *hastatum*, and the low growing *Selaginella helvetica* clinging to exposed rock surfaces.

Driving back the four kilometres to La Brigue, part of France since 1947, we had time for a relaxing drink in the town square to round off a pleasant day's ferning.

Tuesday 7th August (Paul Ripley)

On our last day we travelled back to Nice and visited Vallon du Donaréo, another 'vallon obscur', where small streams have cut narrow gorges in the soft, rather amorphous limestone-rich rock. They are all protected sites under the EU Natura 2000 network. At times the scenery was spectacular, with narrow sections and natural tunnels through the rock. The walls of the gorge were covered with *Adiantum capillus-veneris* – easily more than the entire British population, as was pointed out. We also saw *Equisetum ramosissimum*, *E. arvense* and *E. telmateia* growing in the largely dry river-bed. On the banks we noted *Selaginella denticulata*, *Dryopteris filix-mas*, *Asplenium onopteris*, *Pteridium aquilinum* and *Polystichum setiferum* (in abundance here, though not common elsewhere on our trip). *Asplenium scolopendrium* and *A. trichomanes* were occasionally seen, and *Pteris cretica* and a single plant of the alien *Cyrtomium fortunei* grew further along the gorge. A comparison with the Vallon de la Madeleine visited on the previous Friday might be instructive. In addition to the species noted above, we there saw *Selaginella*

photo: A. Leonard

Vallon du Donaréo, Alpes Maritimes, France

kraussiana, *Dryopteris cambrensis*, and a lot of curious and attractive variegated *Pteris*, almost certainly *P. nipponica*, that has locally been referred to as *P. cretica* 'Medio-Picta' and would repay further study. We also saw one plant confirmed by others as *Dryopteris borreri*, but very difficult to distinguish from *D. cambrensis*. Just beyond where we stopped Sébastien had previously found *D. dilatata*, but we did not go far enough on Friday to confirm this finding.

From Vallon du Donaréo we went to Nice Botanic Garden, where Sébastien works. The dry, hot location is well suited to the display of Macaronesian and sub-tropical plants. *Davallia canariensis*, *Platycerium bifurcatum*, *Nephrolepis biserrata*, *Pteris tremula*, *Christella dentata*, *Dicksonia squarrosa* and *Cyrtomium fortunei* were among the ferns seen.

After refreshments, the Walkinshaws wisely left us, before we drove for about an hour along the busy Autoroute 8 to Théoule-sur-Mer. On the cliff path that accessed the sea from Théoule-sur-Mer, and accessible regrettably only to the most sure-footed, *Asplenium balearicum* grew in rock crevices. This is the only station for this species that can be reached (just) without recourse to a boat. On the path sides we also saw *Pteridium aquilinum*, *Osmunda regalis*, *Adiantum capillus-veneris*, *Asplenium onopteris* and rather dry *A. obovatum* subsp. *obovatum*.

We are deeply grateful to Sébastien for giving so freely of his time and knowledge of the area and its plants (and snakes!) and for planning such a varied and action-packed few days.

NORTH-WEST WALES – 11-12 August

Brian Dockerill (Saturday) & Martin Rickard (Sunday)

This was an exceptionally well attended meeting, with 55 members, most of whom had found accommodation in Criccieth.

The first day comprised visits to four gardens on the Lleyn peninsula. We set out from Criccieth at 9a.m. and gathered in the car park of our first destination, Portmeirion village and gardens (23/592373). The village, which was the creation of Clough Williams-Ellis between 1926 and '76, is well known for its extraordinary idiosyncratic architecture. However, our main target was the gardens, developed piecemeal by purchases of land in the years up to 1954, and the ferns therein. Local knowledge is always a great benefit. On this occasion we were led by William Hughes who knows the gardens well. We set off along a main path from where, amongst many unusual trees and shrubs, we saw the rare maiten, *Maytenus boaria*, an evergreen tree from Chile. We were then quickly rewarded by the sight of our first tree ferns, fine specimens of *Dicksonia antarctica* and perhaps the best *Cyathea dealbata* we were to see on the trip. These were clearly well at home in the moist and sheltered woodland habitat. After stopping to admire fine plants of a particularly good form of *Osmunda regalis* 'Undulatifolia', we were led by William into the undergrowth. Here, after some searching, he pointed out a

colony of *Microsorum punctatum* growing under conditions of perfect drainage on a large rock. The only disappointing find was a specimen of *Dicksonia fibrosa* back in the village. This had been thriving until recently, but the shelter belt had been reduced to open the view and the increased exposure was having a very detrimental effect and the fronds were badly browned.

From here our convoy left for Nanhoron (23/282317) where we were to be the guests of Bettina Harden. Unfortunately, we became separated in the busy traffic but before long we were all gathered on the lawn outside the house and engrossed in the important matter of consuming our packed lunches, along with coffee kindly provided by our hostess. Suitably refreshed we had a brief introduction. The estate had been in the hands of the same family for over 700 years, although the present house and garden layout dated from the late 18th century. Bettina and her husband David had received advice from Martin Rickard on the siting of tree ferns and we were delighted to find tall plants of *Dicksonia antarctica* thriving in a sheltered corner near the house. Further in the garden we saw more recent plantings of *D. antarctica*, *Cyathea australis* and *Lophosoria quadripinnata*. We also found plants of *Woodwardia radicans* and *W. unigemmata* growing together, the rich red colour of the new fronds of the latter demonstrating clearly the easiest means of distinguishing these two species. Bettina explained that "when a house has been in the same family for hundreds of years, little gets thrown away" and we were able to see working greenhouses and potting sheds, these last dating from the 18th century.

We then faced a small logistical challenge, as our convoy had to be reduced to the absolute minimum to permit parking at the garden of John Sanford in Abersoch (23/313266). We entered the rear garden to see huge specimens, first of *Dicksonia antarctica* and *Cyathea dealbata* and then no less than four plants of *C. medullaris*. It was suggested that these were likely to be the finest growing in the UK, having been planted in ideal conditions more than ten years ago. The garden was very close to the sea and sheltered from the north by the higher ground of the peninsula. Therefore, although the plants were fully exposed to the sky, the air was very moist. An insight into the climate was offered by a tall *Araucaria heterophylla* (the Norfolk Island pine) growing happily outside without protection. John explained that, when planting, he buried from six inches to two feet of the stem of these large specimens into the ground, staked then securely and watered them daily at

photo: B.D. Smith

John Sanford's Garden, Abersoch, Wales

Tim Pyner, Bridget Laue, Sue Olsen, Jackie Wardlaw, Iwan Edgar, Martin Rickard, John Sanford

first. However, once established, they required little attention. This was graphically confirmed when he told us that he had just returned from a prolonged trip abroad, and that the plants had received no attention at all for the previous six months. This trip had led to a possible gift for Martin, hidden under an upturned pot, but first he had to agree to attempt an identification. This he duly did with the predictable successful outcome, and a plant of *Cibotium chamissoi* (formerly *C. splendens*) was his.

The day ended as it had begun with us again in the capable hands of William, this time in his own garden in Llanystumdwy (23/474386). As we passed down a narrow entrance by the side of the bungalow, the many fine plants whetted our appetites, but nothing could prepare us for the sight of the steep slope at the rear. A maze of narrow paths was soon dotted with people exclaiming in surprise at the range and quality of the ferns. A list is impossible here (one can be found on his comprehensive website at www.mygarden.ws) but two specimens of *Dryopteris neorosthornii* caused much comment. William proved to be a generous host and was hopping from path to path, naming plants and handing out fronds with spores to eager collectors. Extensive though the fern collection was, it was clear that this was the garden of a person with wide tastes and skilled at cultivation, and it contained a rich collection of other genera, particularly of woodland plants.

At this point the weather, which surprisingly had been kind all day, deteriorated as we returned to Criccieth, arriving back just in time for dinner.

Saturday evening & Sunday (Martin Rickard)

Fifty one members and guests sat down for the dinner, an irregular celebration of the Jimmy Dyce supper club at the Marine Hotel. A very enjoyable evening with good company and good food, the only problem was that the hotel's wine cellar was getting low! Our President, Robert Sykes, reminded us of how Clive Jermy dubbed the dinner 'the first Jimmy Dyce supper club' on the Saturday night during the meeting held at Bampton around 20 years ago. Jimmy was present on that occasion, I know he would have approved of our evening in Criccieth, and contributed to the problems with the wine cellar!

On the Sunday morning we arranged to meet at Glynllifon, the former home of the Hon. H.G. Wynn (23/453553). Here he created a significant fernery fully written up by Dr Stansfield in the *British Fern Gazette* for 1925, Vol. 5, pp. 94-99. Glynllifon is a large estate with a huge mansion. The grounds are surrounded by a magnificent perimeter wall several miles long, on which *Polypodium cambricum* 'Cambricum' was reputedly discovered many years ago. In the main valley above the house there is a largely derelict area called the Children's Mill. It was in this area that most of the ferns were found. The most notable was probably *Cystopteris diaphana*, which occurred in several places. It is mentioned in the 1925 account and was probably introduced but with its recent discovery in Cornwall, a not very different climatic zone, it is possibly native. Other ferns included several cultivars of *Polystichum setiferum* and *Athyrium filix-femina*, no doubt sporelings from the original planting. In a delightful valley a small plantation of *Dicksonia antarctica* was settling in nicely. Before moving on, Bryan Smith did brisk trade in the car park with Society merchandise.

Our next stop was The World of Ferns, formerly Rickards Hardy Ferns (23 593668). Here we were delighted to see towering plants of *Dicksonia fibrosa* – the tallest I have ever seen – as well as a bewildering range of other tree-fern and ground fern species. The large barn is like a temperate rain forest and could justifiably be a tourist attraction – wonderful! Dick Hayward was on hand to give information on the plants on offer and did brisk trade, ably supported by his partners Ben Kettle and Jenny Jones. I believe Dick has accumulated one of the best fern collections in the UK.

Leaving The World of Ferns we travelled east towards Conway and visited Aberconway Nursery (23/799744), which is extremely well known for its wide range of excellent quality

alpines. It is less well known for ferns. The wide range on offer may have been prompted by our visit, but I know they always carry an interesting selection. Mostly smaller herbaceous ferns, no tree ferns, but all plants are grown on the nursery and are not generally available elsewhere. They even offer a select range of xerics – *Cheilanthes* and *Pellaea*.

As organiser I must say it was a delight to meet so many friends old and new over the weekend. The total attendance was 57 including four notable visitors from America – Sue Olsen (author of the wonderful recently published *Encyclopedia of garden ferns*), Naud Burnett (owner of Casa Flora in Texas, possibly the largest fern nursery in the world), his wife Wim and Pat Riehl, and two from Ireland – Jim and Val Denison. The international flavour of the meeting added greatly to the interest for everyone.

PEAK DISTRICT, DERBYSHIRE – 1-2 September Roland Ennos (Saturday), Bridget Laue (Sunday a.m.), Paul Ruston (Sunday p.m.)

On a sunny Saturday morning a group of 24 'ferners' set off from Monsal Head (43/185715), north-west of Bakewell. The group descended to the Monsal viaduct and the end of the tunnel where the first ferns were spotted: *Dryopteris filix-mas*, an unidentified *Polypodium*, *Asplenium scolopendrium*, *A. ruta-muraria* and *A. trichomanes* subsp. *quadrivalens*. Further along the fern-rich cutting (43/178718) were more of these ferns, along with plentiful *Cystopteris fragilis* and our first hard shield fern, *Polystichum aculeatum*. A huge *Dryopteris* was also spotted, which turned out to be an *affinis*-sized *D. filix-mas*. Turning right from the trail onto the path to the River Wye, we passed several specimens of *Asplenium trichomanes* subsp. *quadrivalens* growing on scree.

The path led down to the river at Cressbrook Mill (43/172728), where the same three aspleniums were seen growing in the wood on natural rock, along with a fine specimen of *Polystichum aculeatum*. From the bridge spanning the river we were afforded a good view of a single *Asplenium scolopendrium* with lustrous dark green, ramose fronds. On arrival at the aptly-named Water-cum-Jolly Dale, dabchicks were spotted on the millpond and rainbow trout in the crystal-clear water. Refreshments were obtained from a tea shop next to the mill and the group then made its way along the road and river bank under the Monsal viaduct to the weir (43/176713). Here *Polypodium vulgare* was spotted growing epiphytically on a riverside tree while plenty of specimens of *Dryopteris dilatata* dotted the hazel coppice and ash woodland beside the path leading back to Monsal Head. Lunch was taken here, in the pub, tea shop or alfresco.

We travelled by car to the next stop, Coombs Bridge near Bakewell (43/230679), where two impressive stands of *Equisetum* were examined along the footpath to the south. The first group, though seeming to have characteristics of *E. telmateia*, were pronounced by Patrick Acock to be simply very robust specimens of *E. arvense*. A second colony further along the path was *E. telmateia*, probably the largest and finest in the Peak District.

The final stop for the day was at the car park at the foot of Topley Pike (43/104725). We walked downstream along the River Wye, spotting a dipper before the first ferns were encountered on a railway viaduct: *Asplenium scolopendrium*, *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens* and *Cystopteris fragilis*. Further along the path, just before the cottages, a number of ferns were found that gave the group interesting identification practice: huge colonies of *Polypodium interjectum* and *Asplenium trichomanes* subsp. *quadrivalens* covered a scree bank by the side of a viaduct. A nearby tree was host to an epiphytic colony of *P. interjectum*. Rising to the Monsal Trail proper, we examined the 'well-ferned' cutting (43/115727) where large, healthy examples of the limestone oak fern, *Gymnocarpium robertianum* were found at head height on the north-facing rock wall. Lower down were many specimens of the exquisitely-shaped *Asplenium trichomanes* subsp. *pachyrachis*. At the far end of the railway line was a footbridge over the

photo: B.D. Smith

Pat Acock examines *Polypodium interjectum* in Derbyshire

river where there was a fine specimen of the lady fern, *Athyrium filix-femina*, together with *Dryopteris dilatata* and *Polystichum aculeatum*. The final destination was the stepping stones in Chee Dale (43/124732), where on the rock-face on the far side an unusual specimen of *Cystopteris fragilis* was found with similarities to limestone oak fern. The possibility that it was a hybrid was mooted. Less contentious but even more satisfying was the final discovery on the rock-face above the stepping stones of *Asplenium viride*, its green stipe readily distinguishing it from *A. trichomanes*. The group returned to the cars, and after a quick pit stop reassembled at the White Lion, Great Longstone, where vital tissues were restored with a good meal and fine wines.

We launched our Sunday morning excursion to Hay Wood from the Grouse Inn (43/258779), north-east of Froggatt. The sandstone terrain (the Dark Peak) with acidic conditions hosted distinctly different ferns from those seen the previous day in the alkaline conditions of the limestone areas (the White Peak). Immediately we observed *Pteridium aquilinum*, curiously missing on Saturday, and instead of the ubiquitous *Dryopteris filix-mas*, today's common fern was *D. dilatata* in abundant stands. Along the trail we encountered a few *Athyrium filix-femina*, and a new fern for the weekend, *Oreopteris limbosperma*. In an open boggy area we found healthy stands of *Equisetum sylvaticum* and *E. arvense*. Good specimens of *Blechnum spicant* were found in shady areas along the path. Eventually we did find a *Dryopteris filix-mas* and a nice *D. carthusiana* conveniently growing along the path. Some inconclusive discussion followed later about a potential hybrid between *D. carthusiana* and *D. dilatata*. There were several *D. borreri* in the woods. A clump of *Polypodium interjectum* was seen in a stone wall.

We had a rather challenging scramble up the hillside to return to the road, but were rewarded by finding several large *Asplenium scolopendrium* plants. The roadside trek yielded a single specimen of *Dryopteris* × *complexa* (confirmed later after microscopic examination of the spores – small and misshapen – by Matt Stribley and Bruce Brown). Large mixed communities of *Equisetum arvense*, *E. fluviatile* and *E. palustre* – including polystachous specimens – were seen along the damp ditches (43/256775). We reached the Grouse Inn for a hearty lunch before the clouds moved in and rain started.

Some members then set off on their homeward journey. The remaining group made the short drive to Ramsley reservoir to visit a site renowned for its quite vigorous *Asplenium ceterach* (43/285745), which has colonised whole sections of the stone walls along the overspill of the disused reservoir. A long section of the overspill is fenced-off to stop the Derbyshire sheep grazing the fern communities along the walls; this has obviously had some success, as the difference in the fern growth between the fenced and unfenced sections of the overspill was quite noticeable. *Cystopteris fragilis*, *Asplenium adiantum-nigrum*, *A. ruta-muraria* and *A. trichomanes* subsp. *quadrivalens* were also present. One particularly robust specimen of *A. trichomanes* with large scalloped basal pinnules caused interest and discussion. We determined that it was probably subsp. *quadrivalens*.

After books and other merchandise were purchased, the group dispersed.

NORTH LINCOLNSHIRE – 29-30 September

Paul Ripley (Saturday) & Pat Acock (Sunday)

Fourteen members and guests, most of whom had met the previous evening close to Lincoln's beautiful cathedral, assembled at Lincolnshire Wildlife Trust's (LWT) Nature Reserve at Moor Farm (53 226635), south-west of Horncastle. We were fortunate to be joined for the whole weekend by Paul Kirby, BSBI recorder for North Lincolnshire. This reserve was formed from abandoned agricultural land on Fen-edge sand and gravel. The young woodland has been selectively thinned, rowan in particular, and measures taken to maintain a high water table. *Dryopteris dilatata* and of course *Pteridium aquilinum* were common, but in the wetter areas we soon found *D. carthusiana*. Ken Trewren confirmed for us the presence of *D.* × *deweveri*. *D. filix-mas* and *Athyrium filix-femina* were occasionally seen. We were also delighted to find an adder and watched him at close quarters as he somewhat grudgingly responded to our careful scrutiny.

Our next site, Kirkby Moor, was nearby (53 225629). Also an LWT Reserve, this is the largest remnant of the once extensive heathlands of the Woodhall Spa district. The sands and gravel were deposited as part of a delta system on the edge of the Great Fenland Lake during the last Ice Age. The soil is poor, and heath-like conditions are maintained by some control of bracken and scrub, and selective grazing by Hebridean sheep. We again found *Pteridium aquilinum*, *Dryopteris dilatata*, *D. filix-mas* and *D. carthusiana*. However, there were also isolated examples of characteristic *D. borreri* and a very fine *D. affinis*. Large plants of *Athyrium filix-femina* grew in wetter areas near a former water-works, and here we also found *Equisetum arvense* and *E. palustre* beside pools. *Blechnum spicant* completed our count.

Our last site was Hatton Wood, part of Forest Enterprise's Chambers Farm Wood (53/148739). This is one of the once extensive Lincolnshire Lime-woods: funding from the Heritage Lottery Fund is being used to try to link these back together with green 'corridors' and widespread planting. This was a drier wood (and lime trees were not all that prevalent), but we found *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. dilatata* and *D. carthusiana*, with probable *D.* × *deweveri*. We also saw *D. borreri* and *Athyrium filix-femina*.

photo: B.D. Smith

Laughton Forest, Lincolnshire

Pat Acock, Jonathan Crowe, Paul Ripley, Graeme Clayton, Paul Kirby, Paul Ruston, Lindsey Holleworth, Ken Trewren, Pamela Simpson, Bruce Brown, Gill Smith, Neil Timm

At 10a.m. on Sunday we met south of Scunthorpe at Laughton Forest (43/869993), where we walked along a forest track to find *Dryopteris dilatata*, *D. borreri*, *D. carthusiana*, *Blechnum spicant*, *Athyrium filix-femina*, *Oreopteris limbosperma*, *Equisetum arvense* and *E.* × *litorale*. *Dryopteris* × *deweveri* was also added to the list by eager enthusiasts who left the path and entered the forest. After an hour or so we crossed the road to 43/874995, the most easterly part of Laughton Forest known locally as 'Roses'. We saw a large number of plants of *D. dilatata* and what we had really come to see - a very large 1.78m specimen of *Dryopteris affinis* situated in an area where there were 62 ponds whose origin has been lost in antiquity. We sadly also came across a young dead barn owl. We moved over to the western side of Laughton Forest (44/834220) where we had lunch and walked into the woods to add *Polypodium vulgare*, as well as spot a large grass snake, and although we found *Dryopteris carthusiana* we were unable to find *D.* × *deweveri* this time.

We next parked in Flixborough (44/874150) opposite a ferny wall down which a barn roof drained. There were some really huge specimens of *Asplenium trichomanes* subsp. *quadrivalens* along with *A. adiantum-nigrum*, *A. scolopendrium*, *A. ruta-muraria* and *Dryopteris filix-mas*.

On the school wall at Alkborough (44/884219) we were amazed at how well *Asplenium ceterach* was established, with a few plants even spreading to the opposite side of the road.

Weary, we travelled to Neil Timm's house where, after a welcome cup of tea and most excellent home-made cakes provided by his parents, we proceeded to the garden, which was well established and full of interesting ferns as well as many other plants.

Next came the wonders of Neil and his father's Fern Nursery. Neil has gradually expanded the business from a small project providing ferns for their landscaping business to seven very fine houses producing an incredibly diverse and interesting selection of hardy ferns. Neil had one or two real treasures that he wanted his visitors to have as he said we would value them all the more. We then had an explanation of Neil's growing technique, which he describes as crude but which I would describe as well thought out and effective. I would thoroughly recommend a visit to Neil's nursery. His plants have been highly recommended at shows for their condition and he sells large plants far too cheaply, many of which are seldom offered elsewhere.

We would like to thank Neil Timm for his wonderful generosity and kind hospitality, and Graeme Clayton for organising a very well-planned and thoroughly enjoyable meeting in an area that most of us did not know. We were surprised by its interest, variety and beauty.

TEXAS, USA – 3-15 October

Introduction

Pat Acock

Whilst waiting for our final meal on the 2006 German Garden Tour, Naud Burnett offered to arrange a tour of Texas the next year. We immediately decided to take him up on his kind offer. Texas, contrary to my preconceived ideas of its westerly nature, is right in the middle of the southern states. Naud mentioned in his early notes that it is a very diverse place of extremes with hardiness zones 6 to 10 in an area the size of Germany. We were soon to realise how different the various regions were and to appreciate how large the state was by clocking up 3,000 miles on the bus.

Naud and Wim Burnett ferried groups from the airport to the hotel. In the afternoon we went to their beautiful house in Dallas. Naud had an architect design the house from one he had seen in a magazine and it includes an internal conservatory for ferns plus an outer courtyard garden with water features; many of the ferns he promotes in his catalogue were growing most luxuriantly. We were treated to a delicious buffet supper where we caught up with friends as they drifted in. We also met many of the senior staff from Naud's Nursery, Casa Flora.

Day 1, 3rd October – Fort Worth **Pat Acock**

After a short bus ride to Dallas's sister city, Fort Worth, we arrived at the Fort Worth Botanic Garden where we were greeted by the director. He introduced us to John Langevin, who took us to the large conservatory that he is responsible for. Inside was a wealth of botanical treasures. Amongst the ferns were many plants of *Didymochlaena truncatula*, *Adiantum peruvianum* and *A. capillus-veneris*. Growing epiphytically were single plants of *Pyrrosia longifolia*, *Phymatosorus diversifolius* and *Asplenium antiquum*. On the ground was a majestic *Angiopteris evecta* as well as *Blechnum gibbum* and *B. brasiliense*. For me, the nearly three-metre tall *Acrostichum danaeifolium* stood out, with its fertile fronds just ripe.

We were then taken by Cathleen Cook to see the ferns outside. After a short walk across a board walk through native forest, we were taken to see a collection of ferns donated by our host Naud's nursery. We went on to the Japanese garden, which although beautiful and very large only had many plants of *Cyrtomium falcatum* and *Thelypteris kunthii*.

After a very good lunch at the Kimball Art Museum, a short drive took us to the Botanical Research Institute of Texas (BRIT) where we had a delightful afternoon. We were met by the Chair of Texas Botany, Barney Lipscomb, who introduced us to the history of BRIT. Then Tiana Franklin, a Herbarium Collections Assistant, gave us a very informative tour of the herbarium, introducing us to its history and the work being undertaken and was so enthusiastic about her work. I was especially interested in the way the herbarium was used by an amazing number of people, from seven-year-olds through to mature students.

The librarian, Gary Jennings, gave us a brief history of how the library was started in 1946 and then proceeded to show us some of the collection's literary treasures. These included *The ferns of North America* by Eaton and the incredible *Plantarum rariorum horti caesarei Schoenbrunnensis descriptiones et icones* (1797-1804) (Descriptions and pictures of rare plants in the gardens of Schönbrunn castle) by Jacquin. The volume we saw contained line drawings of ferns that were hand-coloured by a team of artists. The book came about during a mini ice age, when the Empress Marie-Teresa's hothouse collection of plants was devastated. She resolved to rebuild the collection by sending botanists into the field to re-collect the lost plants, and then had a complete record of the plants documented for posterity by artists in 200 copies of the book.

Tiana then took us to see how the herbarium sheets were being scanned and made available with other information for workers around the world. BRIT has digitised all their type specimens and they are now working on the rest of the collection. These can be seen on www.brit.org.

All too soon we had to leave, and we made our way to the charming garden of Judy and Joe Caughlin. The garden was beautifully placed overlooking Dallas and one had a much better idea of the way the area must have looked before the twin cities developed. The garden had a whole range of beautiful plants, and water features and statues were complemented by ferns such as *Arachniodes aristata*, *Dryopteris ludoviciana*, *D. championii*, *Thelypteris kunthii* and *Cyrtomium falcatum* 'Butterfieldii'.

Day 2, 4th October – Dallas **Sue Olsen**

Our day 2 tour could aptly and accurately be titled 'Highlights of Dallas', at least for the garden-minded. After an interesting spin through the comfortable residential areas where the well-to-do reside, we headed for the 66-acre Dallas Arboretum. This is the horticultural gem of the city and includes the Palmer Fern Dell, the Jonsson colour garden and the Trammell Visitor Center, all designed by Naud Burnett and his landscape design company.

After a visual introductory presentation we eagerly left for our visit to the fern dell, passing on the way the Halloween-themed pumpkin displays, some 20,000 in all as well as 30,000

photo: A.H. Ogden

Shanti Claycamp with a tray of sporelings at Casa Flora

After lunch we spent an interesting and educational afternoon at Casa Flora, Naud's distinguished nursery. Founded some 41 years ago, with ferns introduced in the third year, the nursery now ships approximately 16 million ferns worldwide, making it an international leader in production and distribution. We were divided into small groups to allow experts Shanti Claycamp, Jose Aguirre and Kent Kratz to share their specialised knowledge with us. We learned about their propagation techniques including both spore production and tissue culture, transplanting procedures, and growing-on in huge automated temperature-controlled greenhouses housing thousands of plants per lengthy bench. As a finale we admired carts of the finished product awaiting shipment. It was fascinating.

Thus educated, I must admit, however, that the most popular attraction was the huge greenhouse filled with stock plants. The group approached with what might politely be called 'lust let loose'. Here were Naud's treasures, from the familiar to the exotic, the temperate to tropical, and xeric to epiphytic, all too numerous to name. It was a very special ending to a very special day.

chrysanthemums, designed to entertain October visitors. The dell covers just over an acre in a shaded but prominent area. This is a Hardy Fern Foundation display garden and the collection includes some 160 different fern types ranging from temperate species and cultivars to tropicals. The latter are added for seasonal interest in the spring to autumn months and removed to the safety of frost-free comforts for the winter. Fog from a tree-mounted mist system that spans the dell sprayed lightly and periodically to cool both the visitor and the plants. The mist lowers the ambient temperature by approximately ten degrees and makes it possible to maintain a healthy green, rather than crispy brown, collection throughout the hot summer. Designed for both aesthetics and education the garden exhibit includes ferns such as *Dryopteris celsa* and *D. ludoviciana* in close proximity and in juxtaposition with healthy stands of exotic tender ferns including *Hemionitis arifolia* and a crowd favourite, albeit a nursery and tropical 'weed', *Pityrogramma calomelanos*.

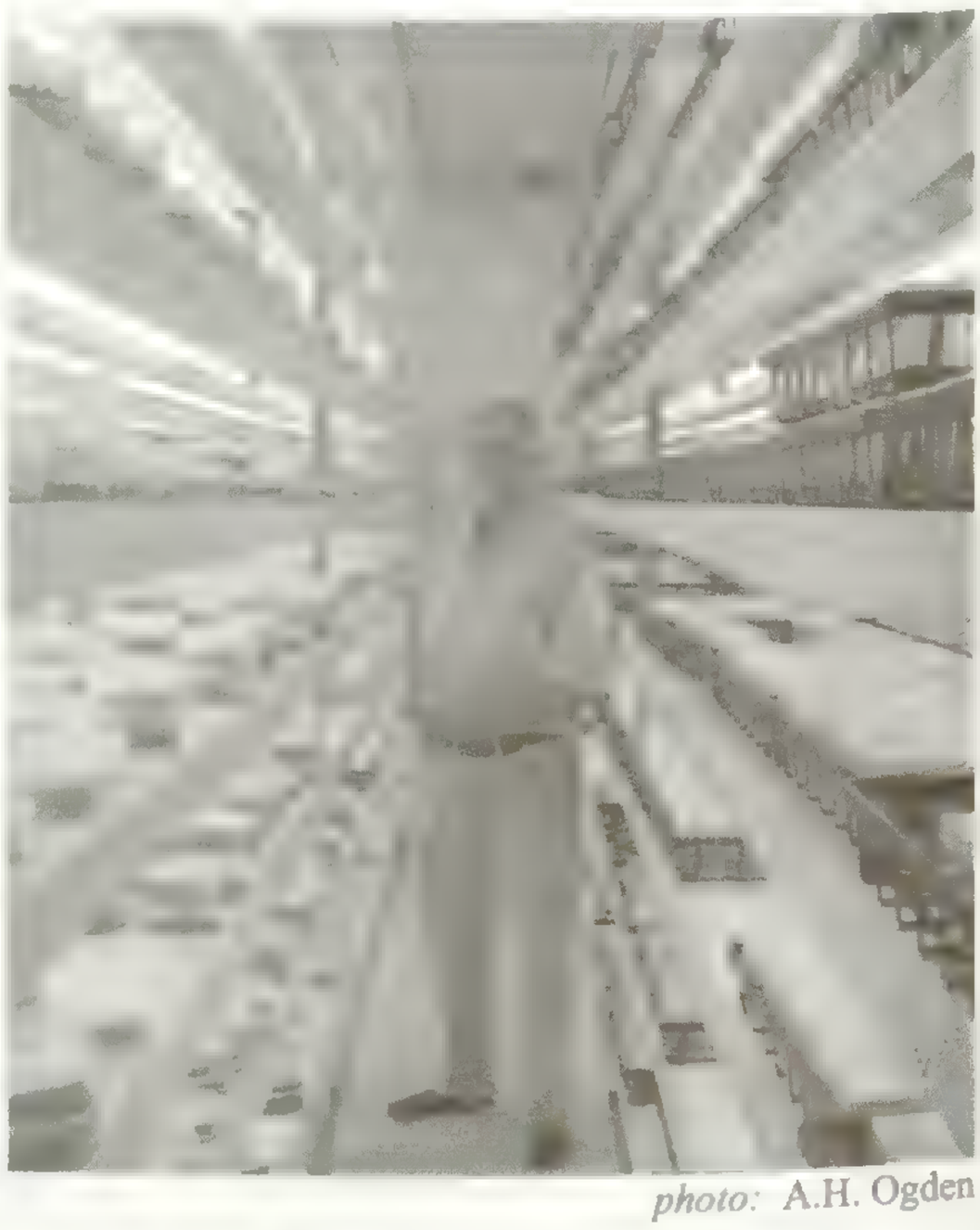

photo: A.H. Ogden

Kent Kratz in Casa Flora's tissue culture laboratory

Day 3, 5th October – Garvan Woodland Gardens & DeGray State Park Martin Rickard

The day started with a three-and-a-half-hour coach journey, but it seemed we reached our destination in no time at all. We sat down straight away for a traditional Southern lunch in the former Confederate capital of Washington, Arkansas. Afterwards we were given a rapid tour of this very small town, which is run as a museum; we were fascinated by the history during the Civil War and how settlers used to pass through. Apart from *Pleopeltis polypodioides* on many trees, we saw no ferns.

We were quickly back on to the bus and whisked away to Garvan Woodland Gardens, not far from Hot Springs, about 50 miles south-west of Little Rock. We were shown around the garden here by Don Crank, a local fern enthusiast. Many ferns had been introduced but some were native. It was not always easy to tell the difference! Apart from common species it was a pleasure to see *Botrychium biternatum* and *B. dissectum*, our first *Cheilanthes* – *C. alabamensis*, *C. lanosa* and *C. tomentosa*, *Woodwardia virginica* and *W. areolata*. Still of interest, despite their demise as fern allies, were *Selaginella braunii*, *S. uncinata*, *S. apoda* and *S. kraussiana*. Before leaving this wonderful lakeside garden we were shown the Anthony Chapel – a truly extraordinarily beautiful building. You need to see it to understand!

Dusk was setting in as we left for our overnight destination at the DeGray Lake Resort State Park. The Lodge here was a magnificent hotel, but sadly in a 'dry' county! Conversation over dinner was more ferny than usual!

Day 4, 6th October – Ouachita National Park Alan Ogden

It was another fine hot day for our first exploration of natural sites. Our hotel was on an island in the DeGray Lake, Arkansas and offered many interesting outdoor activities but we were off early on a long bus ride to Ouachita National Forest (pronounced 'wash-ah-taw'). Naud had arranged for a couple of local experts to lead us – Theo Whitsell who is a botanist for the State of Arkansas and Dr John Simpson, a man with much knowledge of the area.

When we arrived at the forest, Theo gave us a short talk about the area, which has Palaeozoic rocks with much faulting that leads to great plant diversity. We plunged into the woods in Indian file and were immediately rewarded by *Botrychium biternatum* with a fresh fertile spike, and *Phegopteris hexagonoptera*. The American botrychiums are very attractive; when is someone going to solve the problem of growing them in Britain? A short distance further on we met *Polystichum acrostichoides* and *Asplenium platyneuron*. We had been told that we might have to wade some streams but the water level was low enough for us to hop from stone to stone. We found *Athyrium filix-femina* subsp. *asplenioides* though I must admit that the minor differences between the American athyriums eluded me. *Onoclea sensibilis* was there too, an old friend that is common in damp areas all over the eastern half of the continent. There was some debate over a large *Dryopteris* (when isn't there?), which was finally diagnosed as *D. celsa* and there were two osmundas, *O. cinnamomea* and *O. regalis*, which is subtly different to the European form. *Woodwardia areolata* was growing in standing water. On the branches of some trees was the resurrection fern, *Pleopeltis polypodioides*, an attractive little fern. *Thelypteris noveboracensis* and *Pteridium aquilinum* var. *pseudocaudatum* made up the collection in the flat wet area.

The ground began to rise and Theo showed us the remains of some spring orchids and a large *Dryopteris* × *australis*. On the higher ground he located an elongated patch of *Adiantum pedatum*. John Simpson recalled it was the site of a fallen tree many years ago. Here we turned to make our way out of the wood and discovered a solitary specimen of *Botrychium virginianum* at the foot of a tree. We didn't see any snakes but John Acock photographed a blue salamander and a spring peeper frog that resembled a dried leaf. By the stream were little mud piles like molehills – the presumed home of crayfish.

We emerged from the wood at 11.00a.m., to be proudly shown *Equisetum arvense* in the verge – it is rare in these parts! Also seen by the road were *Dryopteris celsa*, *Thelypteris kunthii*, a *Woodsia obtusa*, a *Selaginella apoda*, and *Thelypteris palustris* by the stream.

Climbing back into the bus for a welcome cooling-off, we then had a short drive to a working quarry where the tortured patterns of the exposed rock strata were spectacular. We had come to see the *Lycopodiella appressa*, another Eastern species that had widely colonised the undisturbed areas of the quarry base. I found a fasciated specimen, a feature that I had not seen before in a clubmoss.

We ate our picnic in an area of Brady Mountain by Lake Ouachita, before another short drive brought us to a steeply sloping dry, hot and sunny wooded area with small oak trees and dry grass. *Cheilanthes tomentosa* grew in this unlikely place wherever rocks gave a haven for the roots. *C. alabamensis* grew from a small cliff along with *Pellaea atropurpurea*. One could only admire these delicate little ferns, which thrived in these hostile surroundings!

Another short roadside foray revealed *Equisetum hyemale*, *Phegopteris hexagonoptera*, *Athyrium filix-femina* subsp. *asplenioides* and *Dryopteris marginalis* before we made our way back to the DeGray Lodge, dropping off our guides at their vehicles. Their local expertise had been essential and we thanked them warmly.

Those with an appetite for more ferning explored one of the short trails near the Lodge where we immediately found *Woodsia obtusa* and *Asplenium platyneuron* by a bridge over a dry creek and *Pleopeltis polypodioides* on the tree branches. Close by was a very large *Botrychium*, which was at first thought to be *B. virginianum* but the woods contained so many examples of large and vigorous *B. biternatum* just reaching maturity that it may well have been the same species. One of the specimens had a fertile frond measuring two feet.

Day 5, 7th October – Caddo Lake & Nacogdoches **Pat Riehl**

There was a beautiful sunrise as we left for the long bus ride to Nacogdoches. Our first stop was Caddo Lake, named after a native American tribe. Flat bottomed boats waited for us in a small rustic town called Uncertain to take us out on the lake for an hour to see the cypress swamps. It is the largest natural fresh water lake in the south, covering 34,500 acres of Texas and Louisiana. The water level is now controlled by a dam. It is an eerie place with cypress trees hundreds of years old draped in Spanish moss, a bromeliad. A water fern called *Salvinia molesta* is a major threat to the lake, as is the prolific water hyacinth. The name should make its character pretty clear. Presently *Salvinia* is mainly on the Louisiana side and those who enjoy and use the lake in Texas are making a serious effort to keep it out. There was an article about it in *The New York Times* on July 25th of this year.

In Nacogdoches we toured Stephen F. Austin College's Mast Arboretum with Roger Hughes and Dr David Creech, the recently retired professor of the College and now head of the arboretum. A staff of five and a lot of volunteers take care of 60 acres. Roger was largely responsible for the ferns in this arboretum. This area is in hardiness zone 8 and gets about 48 inches of rain per year. They have a hot, humid, dry summer. There had just been a plant sale and we got a chance to see what was left over: *Dryopteris ludoviciana*, *D. championii*, *Athyrium otophorum* and *Woodwardia orientalis*, to name but a few. I learned that *Athyrium* × 'Ghost' will grow crested fronds in very hot weather, then when it cools produce normal fronds again. There was also a curiosity, an *Amorphophallus titanum* called 'Jack', whose corm weighed in at 26 pounds. At one point we crossed a flood canal bridge and found ourselves in an area of ferns. Unfortunately there was simply not enough water for them. Many of the ferns were mislabelled, which was not helpful to a beginner like me. We moved at breakneck speed and there were lots of winding trails, which caused some of us to lose the main group. We did happen upon some *Cheilanthes* and *Pellaea* though there is some question as to which they were, and there was a wonderful patch of *Pleopeltis polypodioides* on the roof of a little shelter.

We all found our way back to the bus and went to the National Centre for Pharmaceutical Crops. Here we met Dr Shiyou Li who has been working on the use of extracts of native plants as possible cancer treatments since 1999. So far they have worked with button bush, *Cephalanthus occidentalis*, red buckeye, *Aesculus pavia* and *Camptotheca*, the Chinese happy tree. The centre has received a grant to study weeds and ferns. Ferns are good research subjects because they are usually virus-free. The current fern candidates are *Pteridium aquilinum* and *Pleopeltis polypodioides*.

After this we went to Hotel Fredonia and finally to dinner at an Italian restaurant, joined by our hosts for the day.

Day 6, 8th October – Enchanted Rock **Klaus Mehltreter**

We left our hotel in Nacogdoches at 8.15a.m., heading south-west to our next destination, Salado. After a three-hour drive through a changing landscape from pine-oak forests to mesquite (*Prosopis glandulosa*) savannahs and pastures, we arrived at the Stagecoach Inn, an old charming restaurant that Naud had known for more than 60 years.

After lunch we were ready for our field destination, Enchanted Rock State Natural Area, near Fredericksburg, where we arrived at 4.30p.m. Even for the late afternoon and the cloudy weather, it was still hot (about 85°F) but windy. Enchanted Rock is in Llano County and presents a huge granitic dome of Precambric origin. Its peak reaches an elevation of 1,825 feet and overtops the surrounding landscape by about 400 feet. The pink granitic rock with an age of 1.25 billion years was uplifted in the Tertiary and scraped clean by erosion from overlying sedimentary Cretaceous rocks. Its name makes reference to the creaking and groaning noises caused when blocks grind against each other during the expansion caused by solar heating during the day and contraction during the cooling nights. However, on the top we did not hear anything other than the wind and we enjoyed an incredible outlook over the surrounding plain with several other granite formations, and observed instead several enchanting fern species.

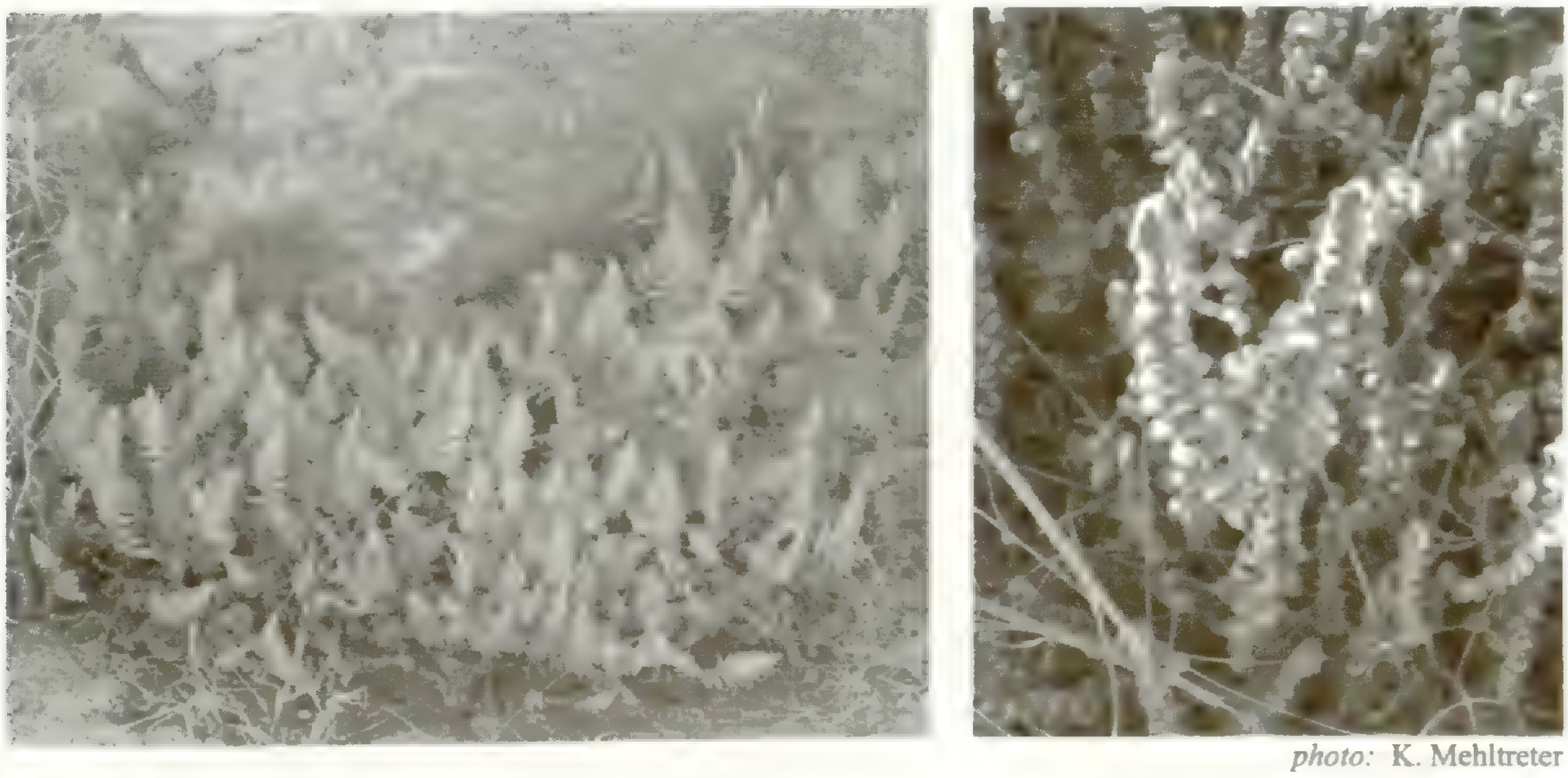

photo: K. Mehltreter

***Cheilanthes lindheimeri*: hydrated open leaves** (*left*)**, dry inrolled leaves** (*right*)

The most abundant species, taking advantage of cracks and fissures in the rock, were *Cheilanthes lindheimeri* with its wide brown costal scales on the lower leaf surface, and *C. tomentosa*, which has only dense tomentose hairs on the leaf surface beneath. Both species formed mainly pure colonies and only sometimes mixed with a mat-forming, erect species of *Selaginella*, probably *S. riddellii*. The two dominating species of *Cheilanthes* were especially happy on east-facing slopes where they were in the shade during the afternoon. Although present in other places, here their leaves and pinnae were completely

inrolled, showing their lower leaf surfaces covered with hairs and/or scales. A third species, *C. kaulfussii* was immediately spotted by Patrick who observed it only on the lowest sites, growing in the surrounding vegetation but not on Enchanted Rock. *C. kaulfussii* could be distinguished easily from the two other species by its glandular and pentagonal leaves. Not surprisingly, we could not find *C. alabamensis*, which has been recorded for this site, because this species prefers mainly limestone.

The genus *Pellaea* was also present with three species: *P. ovata* with its characteristic zig-zag-shaped rachis was common and while a dozen *P. ternifolia* were observed, *P. wrightiana* was only spotted once. *P. ternifolia* has pinnae with three pinnules, and the pinna midvein below is distinctly coloured from that of the lamina, while *P. wrightiana* has mostly five pinnules on the basal pinnae and the pinnae midvein and lamina below are the same colour. Both species have strongly mucronate (acute spine-like) tips to the pinnules. On the way back, we located a second species of *Selaginella* with prostrate stems and roots on the branch nodes, which resembled *S. peruviana*. Because it was completely dry and sterile, its identification remains doubtful.

After this exciting excursion into Texas' geological history and rock ferns, our driver brought us during sunset to Fredericksburg, an old German settlement with nice Biergarten and shops, where we stayed for the night in the Fredericksburg Inn.

Day7, 9th October – Austin **Jennifer Ide**

The day began with a two-and-half-hour journey to Austin, capital of Texas. Our first visit was to the garden of James David. A landscape architect by training, he described himself as 'just a gardener', explaining that he grows what he enjoys growing, so his garden is full of 'wacky stuff'. A persimmon tree laden with large fruit is the first plant to greet visitors at the front gate; just a few steps further and one soon realises that this garden is an eclectic mix of flowering shrubs and herbaceous perennials, cycads, cacti, ferns and grasses, planted seemingly somewhat casually in beds or pots, and garden features including a rill down a flight of steps into an ornamental pond, a swimming pool and clipped box hedges. Trees, festooned with climbers, provide the shade. The ferns, scattered around the beds of the garden, included *Woodwardia orientalis*, *Blechnum appendiculatum*, *Dryopteris sieboldii*, *Cyrtomium falcatum* and the ubiquitous *Thelypteris kunthii*. Four species were identified on various walls around the garden: *Cyrtomium falcatum*, *Phymatosorus diversifolius*, *Drynaria quercifolia* and a Boston fern, *Nephrolepis exaltata*.

We moved on to the Zilker Botanical Garden in the same neighbourhood. Here we were met by Laura Joseph of The Garden Club of Austin, who was responsible for our itinerary in Austin. The garden is described as a "botanical showpiece for native Texan foliage plants, roses, ponds, an oriental garden and 100 million year old dinosaur tracks"! *Adiantum capillus-veneris* and *Asplenium platyneuron* were growing in a falling cascade of ponds. A narrow wooded area separating the rest of the gardens from the Visitor Centre was under-planted mainly with ferns, including *Cyrtomium falcatum*, *Astrolepis sinuata*, *Dryopteris filix-mas* (known in the USA as the Mexican male fern), *Athyrium niponicum* 'Pictum', *Dryopteris cystolepidota*, *Pteris vittata*, *Blechnum brasiliense*, and, of course, *Thelypteris kunthii*. The tree ferns *Cyathea cooperi* and *Dicksonia antarctica*, a large *Nephrolepis exaltata* in a ceramic pot and two enormous clusters of *Platycerium alcicorne* hanging from the branches of a tree provided eye-catching features.

In the Hartman Prehistoric Woodland Garden, a life size *Ornithomimus*, the footprints of which were discovered in the gardens in 1992, 'inhabits' an island over which drifts of mist help to create a steamy prehistoric atmosphere. In the surrounding garden, ferns, horsetails and liverworts represent the spore-bearing plants that existed at the time of the dinosaurs, along with examples of the more primitive angiosperm and gymnosperm families, including six species of cycad. Pteridophytes were represented by *Dryopteris erythrosora*, *D.* ×

australis, *Cyrtomium falcatum*, *Thelypteris kunthii*, *Astrolepis sinuata* and the under-storey tree ferns *Cyathea cooperi* and *Dicksonia antarctica*. Also of particular interest was a colony of *Equisetum*, probably *E. giganteum*, as well as *E. variegatum* and *E. hyemale* and extensive carpets of *Marsilea macropoda*, growing atypically for a *Marsilea* in dry soil.

After a short welcome by Sara Macias, the Central Parks Division Manager, we had lunch in the garden, provided by the ladies of The Garden Club of Austin. Then we crossed town to the Lady Bird Johnson Wildflower Center. President Johnson's wife was a great lover of the American countryside and especially its wild flowers. She set up the centre for research and the encouragement of the growing of local native flora in gardens and along the major highways of the United States. Two or three of the demonstration garden plots featured *Thelypteris kunthii*, *Adiantum capillus-veneris* and *Arachniodes simplicior* var. *variegata*. In the dry lands demonstration area, *Astrolepis cochisensis* and *Cheilanthes alabamensis* were included in the planting.

Our final visit was to the Town Park, newly opened in August. There were no ferns here, but our Austinian hosts were obviously thrilled with the city's new facility and wanted to show it off, especially its three main features: a retaining lake to take the overflow from the Colorado River, which flows through the town, an interactive fountain and an observation hill. Nearing 6p.m., it was time to book into our hotel and set out for Congress Avenue Bridge, opposite the hotel, to go bat-watching!

Day 8, 10th October – Westcave Preserve & Austin **Don Naylor**

It was a 40-mile drive from Austin to Westcave Preserve in the Texas Hill Country. The Preserve is on the Pedernales River and demonstrates unique ecological diversity with rock outcrops enclosing a woodland canyon. Limestone aquifers create pockets of spring water that provide moisture for abundant plant life. The area is subject to severe flooding, the worst in recent times being in 1970, when the river reached a height of 70 feet above flood stage.

photo A H Ogden

***Pellaea ovata* in Westcave Preserve**

Two ecosystems are a grassland area with 45 plant species and a sheltered limestone canyon that includes rare plants with numerous bald cypress trees, one of which is estimated to be 400 years old. The Preserve is ecologically sensitive, and while visited by large numbers of school-children, it is carefully protected. Rock ferns were common. We noted *Adiantum capillus-veneris*, *Asplenium resiliens*, *Cheilanthes alabamensis*, *Argyrochosma dealbata*, *Pellaea atropurpurea*, *P. ovata*, *Thelypteris kunthii* and *Equisetum hyemale* subsp. *affine*. We also saw *Anemia mexicana*, recently re-established from a reserve close by. *Cheilanthes horridula* and *Astrolepis integerrima* are recorded but were not observed by us.

At the bottom of the canyon was a forty-foot waterfall with a small cave behind it. Spring water from the waterfall had formed deposits of tufa on top of travertine rock. Ferns were scattered, along with displays of moss referred to only as 'common rock moss'. Ferns growing in a tropical-like environment included large clumps of *Thelypteris kunthii* on mini-islands in the stream, while numerous *A. capillus-veneris* were basking on rock

outcrops in the stream. Nine unidentified lichens were observed on one piece of limestone rock. There were pockets of quiet water as well as rapidly flowing water that created two mini ecosystems. Behind the waterfall, formed by erosion of the soft limestone, was a shallow cave with re-forming stalactites and stalagmites - vandals had damaged the columns before the area became a Preserve. Two cotton mouth snakes or water moccasins were playful in a water pocket at the bottom of the canyon.

The group returned to Austin for lunch. Tour participants were then given the choice of five activities – visiting the Capital Complex, The Bob Bullock Museum of Texas History, Umlauf Sculpture Garden, The Blanton Museum of Fine Art, or local nurseries.

For this writer, the most memorable part of the tour was the visit to two private gardens. The group was invited to the home of Scott Stewart, a retired Dell executive, for refreshments before dinner. The Texas-style home was perched near the edge of a limestone outcrop. It featured a swimming pool and water garden that provided wonderful vistas of a wooded area and downtown Austin. One side of the house featured a water garden with large boulders brought in and built up to the edge of an outcrop. Scott had used a wide variety of plants, including *Asplenium bulbiferum*, *Cyrtomium falcatum* and *Cheilanthes alabamensis*.

Our last visit for the day was to the nearby southern antebellum-style home and garden of Laura and Cater Joseph, where an international chef served up a wide selection of Lebanese food. The beautifully landscaped garden featured large oak trees and numerous large *Platycerium* hanging baskets. Laura has collected seventeen of the eighteen known *Platycerium* species and many were observed in several display areas around the grounds. Darkness prevented a tour of the garden but a re-visit was scheduled for the next morning. After dessert, Ron Miller, a volunteer from Zilker Garden, gave a demonstration on dividing a *Nephrolepis* while Dr Steven Reynolds demonstrated the proper mounting of a *Platycerium* on a cedar board.

Day 9, 11th October – San Antonio & the Alamo **Pat Acock**

After leaving The Embassy Hotel, Austin, we drove the short distance to the home of our host of the night before to see her ferns in daylight. Laura has a most magnificent collection of ferns, which only really need protecting on those few days in the year when there is a sharp frost or ice-storm. The rest of the year the problem is regularly watering the hanging baskets and ground plants. The hanging baskets are huge and are hung on long metal wires from branches high up in the trees. They contained an array of stenochlaenas and *Nephrolepis* cultivars and species such as *N. biserrata*. Smaller baskets contained *Polypodium formosanum* and *Phymatosorus diversifolius*. As well as the really fine range of platyceriums of varying ages and sizes on a large number of boards, on one small board Laura had a fine hanging *Ophioglossum* similar to *O. scolopendrina* in shape if not size; I do not know anyone else who has done this. In a pot was one of my favourite local ferns, *Astrolepis sinuosa*, growing to an incredible size.

All too soon we were off to San Antonio where we were met at the Botanic Gardens by Paul Cox who had been there since its beginnings. Paul gave us a quick history and tour of the main features before we were left to roam and seek out the ferns. The best ferns were in the dedicated house and the Exhibit Room. Paul had told us not to expect too much of the Fern Grotto but apart from some sun damage to the tree ferns when the power failed, preventing the misting and air circulation, there was quite a laudable collection of tropical ferns. These included *Cibotium schiedei*, *Angiopteris evecta*, *Diplazium esculentum*, *D. proliferum* and *Cyathea glauca*, as well as a few different davallias and aglaomorphas.

We visited the Alamo site, taking in a British pub for lunch. Walking back to the hotel, we saw plantings of *Nephrolepis biserrata*, *N. cordifolia*, *Cyrtomium falcatum*, *Dryopteris erythrosora*, and *Thelypteris kunthii*, which is the most common fern both planted and natural in the area.

Day 10, 12th October – San Antonia to Big Bend National Park **Pat Acock**

We set out early from San Antonio for the long journey westward on Highway 10. Some had a delayed start to lunch at the Rest Stop just east of junction 307, as we found the trees were a staging post for monarch butterflies on their migration to Mexico. Hundreds were fluttering around the trees and resting in the branches. We also found a pecan nut tree with the majority of the nuts perfect to supplement lunch.

After going to the visitor centre at Big Bend National Park we went on to the Chisos Lodge where we met naturalist Petei Guth, our leader for the next two days, who agreed to take us for a short walk above our chalets before our evening meal. Here we were reminded of the characters of *Pellaea atropurpurea* and *Astrolepis sinuata*, and discussed whether or not all the *Cheilanthes* were *C. eatonii*. We also saw *Pellaea cordifolia* for the first time. We then descended for a very pleasant dinner in the restaurant.

Day 11, 13th October – Big Bend National Park **Pat Acock**

Early next morning we were taken by Petei not more than 100 yards from our chalets and saw the delightful *Bommeria hispida* along with *Cheilanthes eatonii*, *C. bonariensis*, *Pellaea atropurpurea*, *P. intermedia* and *Astrolepis sinuata*.

We drove a little way to one of the Big Bend Trails, the Lost Mine Trail. On our very hasty walk here we saw all the previous ferns but had to return all too soon as we were to meet two rangers in 4-wd vehicles who drove us a short way along another trail leading to Cat Tail Falls to save us a little of the walk. This turned out to be my favourite part of the tour. It was an incredibly hot day. The terrain was marvellous. The shrubby plants and cacti all had lots of space around them because of the lack of rainfall, a semi-desert. After half a mile we came across a wooded area with evergreen oaks along the banks of a stream. I thought that we would see ferns here but we did not. However, continuing back into the arid area it was not long before we came to a rocky bluff and saw our first treasure – *Astrolepis cochisensis*. Then came a patch of *Selaginella arizonica*.

As we descended towards the river, which was in a deeply cut channel, the rocky bank to our left revealed more and more gems – *Astrolepis integerrima*, *A. sinuata* and *Cheilanthes eatonii*. Although I have seen it in a pot from time to time, to see a patch of *Notholaena standleyi* growing naturally is simply magical. At the waterfall we saw *Adiantum capillus-veneris*, and *Cheilanthes alabamensis* behind some large rocks close by. On the way back we added *C. bonariensis* and *Notholaena aliena* and Klaus also saw *N. aschenborniana* off the trail. This was a truly splendid day and gave us a close up view of the Trans Pecos terrain we had been passing through for long periods of the day before.

Day 12, 14th October – Girl Scout Camp & Nature Trail in Fort Davis **Jack Schieber**

We started the day at the Mitre Peak Girl Scout Camp, named for the almost perfectly conical peak located nearby. Here we travelled up a stream-bed, mostly dry, nestled in a narrow gorge. The geological formations in this area are commonly volcanic extrusions, often columnar and very striking in appearance. And of course, weathering had had its way over the millennia so that our path wound its way among a mass of boulders fallen from the heights above. The walk was worth it for the beauty of the place alone.

I am from eastern US so the ferns we had been seeing on this trip were almost invariably new to me. I had never even heard of *Bommeria hispida* let alone seen it. We saw *Cheilanthes bonariensis*, *C. wrightii*, *C. tomentosa*, *C. eatonii*, *C. lindheimeri* and of the somewhat related genera, *Astrolepis sinuata*, *Pellaea wrightiana* and *Notholaena standleyi*. I was mostly flummoxed in my observations and in my defence I quote from *Flora of North America*: "*Cheilanthes* is by far the largest and most diverse genus of xeric-adapted ferns. In its classic circumscription, the genus has been notoriously difficult to distinguish from other cheilanthoid genera, especially *Notholaena* and *Pellaea*."

I have always thought of selaginellas as growing in mossy, somewhat protected places; after all, we do call them spike-mosses. Here we saw *Selaginella peruviana* and *S. rupincola* growing on exposed hillsides of rock and they seemed luxuriant in their desiccation. When I took a moment to merely see rather than to study, they were indeed beautiful.

A highlight for me was a headland at the end of our walk where a rock wall overhung a pool. Here southern maidenhair, *Adiantum capillus-veneris*, grew in huge colonies from the roof of the overhang and from every nook and cranny. I know this fern well as it is one of the favourites in my garden so there was no need for study. It was so lovely seeing it growing where it should be.

photo: courtesy A.H. Ogden

Mitre Peak Girl Scout Camp, Texas, USA

Front row left to right: John Scott, Jennifer Ide, Pat Riehl, Sue Olsen, Alan Ogden, Margaret Scott, Rose Marie & Jack Schieber

Rear diagonal left to right: Joy Neale, Martin Rickard, John & Pat Acock, Klaus Mehltreter, Shanti Claycamp, Wimberley & Naud Burnett, Don Naylor

In the afternoon we visited Fort Davis National Historic Site, part of the National Park System. The Fort was active from 1854 until 1891, the troops stationed there protecting settlers, wagon trains and mail coaches, primarily from raids by Indians. Our focus was a nature trail that climbed about 300 feet for more than a mile with many boulders, switchbacks and, here and there, ferns tucked in the crevices. Petei Guth, our guide, had provided a checklist of 20 ferns with a note that we would not see them all because they are

in secluded areas. We saw ferns all along the way but many were dried up almost to the point of being unidentifiable. *Cheilanthes villosa* was the only new one although there was some opinion that we might have seen *C. feei* as well.

Day 13, 15th October – Pecos to Dallas **Shanti Claycamp**

After spending the night in the little town of Pecos, we again loaded the bus and were ready to embark upon the final leg of our journey back to Dallas. As we drove eastwards toward Odessa the landscape was flat with only a few trees. Interspaced with the low mesquite trees were the many 'nodding donkeys' pumping up the rich West Texas crude oil that has sustained that part of the state. After about an hour on the road we stopped at the Monahan Sand Dunes State Park. Naud told us that he had heard of a *Cheilanthes* growing at the top of some of the sand-dunes. His daughter Galen met us and had already scoped out the area for this fern. Climbing up a steep sand-dune where Galen indicated, Klaus suddenly exclaimed "That's impossible!" We huddled around the *Astrolepis sinuata* he had found, everyone vying for a look at this fern. Then Klaus again spoke: "It must be in a pot…" As the pot was pulled from the sand we all turned to look at Naud, who was sniggering on the sidelines, watching the drama unfold. He had pulled a fast one, with his daughter as his accomplice. We continued on into the park where the big dunes were. The bravest of our group climbed these mountainous dunes in order to come whooshing back down on a small plastic disk. We all had great fun.

As we continued to drive east on Highway 20 the landscape slowly changed from low mesquite trees to lush oak forests, indicating a change in rainfall from 15 to almost 40 inches. We sampled Texas cooking at lunch-time at a Cracker Barrel restaurant in Abilene. But the real treat came that evening at our farewell dinner. Everyone checked back into the hotel and we met at Adelmo's, an incredible Italian restaurant not too far from Naud and Wim's house. The food was excellent, but the company was even better. We ate heartily and shared stories from our trip and our lives. Near the end Martin gave a rousing speech recapping some of the best parts of the trip and thanking Naud for the superb job he did in planning the tour. Naud was presented with a memorable glass and two of Martin's books, and Wim with a colourful flower basket. It was a wonderful end to a very memorable trip: Ferns of the South-west.

photo: A.H. Ogden

Naud Burnett relaxing at final dinner, Texas, USA

Conclusion **Pat Acock**

We must thank Naud and Wim for all their hard work in conceiving and executing such a magnificent tour; Naud even got up early the next day to take a hardy few for a second look at his nursery and drove us on to the airport. As he had mentioned in the original notes, Texas was indeed a state of contrasts. The gradation of rainfall from 60 inches in the east to 15 inches in the west gave us valuable lessons in ecology. The ferns were in direct contrast to any I had experienced in being mainly xeric. And it was incredibly interesting to see cheilanthoid fern species first appearing rare then often becoming abundant as the conditions changed as we moved ever westward.

We owe an incredible debt of gratitude to all the staff at Naud's nursery, the garden directors and leaders at the many botanic gardens we visited and the naturalists who gave of their valuable time. To all of them we extend our heartfelt thanks and appreciation, with a special vote of thanks to Laura Joseph and her Garden Club in Austin. We must also thank our ever patient driver, James.

LECTURE MEETINGS AND DAY VISITS

AGM & SPRING MEETING, ROYAL BOTANIC GARDEN EDINBURGH – 24-25 March

Alastair Wardlaw

Not everyone becomes passionately excited by the prospect of an AGM. Nevertheless the 2007 AGM and Spring Meeting, held at the Royal Botanic Garden Edinburgh (RBGE), attracted 43 members from as far apart as London, Cornwall and the Island of Skye. After being welcomed by Prof. Mary Gibby, Director of Science at RBGE, and by Frank McGavigan, the BPS Scotland Regional Group Organiser, we settled down for the main event of the morning, the valedictory speech by the retiring President, Dr Adrian Dyer. His subject was *Discovering the Lost Generations* and the text is presented elsewhere in this issue.

This took us up to the lunch break, which the organising committee had generously set at two hours to allow time for activities that might otherwise have been too rushed. In fact, the two hours were scarcely enough for inspecting the display of old fern books (courtesy of Jane Hutcheon, Librarian at RBGE), looking at the posters, consuming refreshments, chatting to friends, engaging in retail therapy, going on a tour of RBGE ferns, and viewing an automatic slide-show of all the native British fern species. This latter had been prepared by Dr Heather McHaffie, the Conservation Officer at RBGE. In addition, Bryan and Gill Smith had the usual attractive montage of BPS merchandise, Frank Katzer, the new Booksales Organiser, had a table laden with fern books old and modern (of which he sold well over £1,000-worth), while Grant Fortune, Tim Godfrey and Mike Taylor presided over a rapidly snapped-up assemblage of potted ferns contributed by members and which raised £170. I enjoyed Mike Hayward's inspirational display of photos from the Réunion trip, and Frank McGavigan's poster on the new advice for Fern Recording. Yvonne Golding displayed the Citations for the three pteridologists receiving Honorary Membership (see pp. 521-523).

photo: M. Gibby

Pat Acock with *Equisetum* × *schaffneri* at RBGE

In small groups we were privileged to be given a conducted tour of (actually just a small fraction of) RBGE's enormous collection of ferns under glass and planted outside. These were led by Andrew Ensoll, who master-minds the fern-growing at RBGE, and Heather McHaffie. For me,

the highlight in the tree-fern house was *Dicksonia arborescens*, the type species of *Dicksonia*, raised by Andrew from spores collected on the Island of St Helena. This specimen and the few others he has donated, are to my knowledge the only representatives of the type species living in Britain today. Outside the glasshouses, Andrew showed us the South African *Cyathea dregei*, with wrapping to protect against the typical –11°C 'grass' temperatures that RBGE experiences most winters. Nearby we saw where he has been trialling *Blechnum cycadifolium*, from his own growing of spores collected on Robinson Crusoe Island (Juan Fernandez) in the Pacific Ocean.

The AGM started promptly at 2p.m. and finished at around 4.10, the detailed record appearing on p. 503 of this issue. The main events were the election of Robert Sykes as incoming President, and the presentation of reports showing that in most areas the Society is in good health and adequate wealth. However, among the significant challenges still remaining, probably the most pressing is the more vigorous promotion of an interest in ferns, if possible in schools, but certainly to the wider public. This would not only further our charitable objectives but should also increase our membership. AGM-day was rounded off by a dinner, which 35 members attended at the nearby Dionika Restaurant.

photo: F. McGavigan

Robert Sykes (*right*) **takes over from Adrian Dyer as President**

Next day (Sunday), which was dry but with a cold wind, about 25 of us had an excursion to Arthur's Seat, the volcanic mountain and park in central Edinburgh. This was led by Adrian Dyer who took us to see one of Britain's rarest wild ferns, *Asplenium* × *murbeckii*, which exists as a single plant on a rock-face about two metres above road level. Growing nearby in the same basalt-type rock were the two parent species, the common *A. ruta-muraria* and the extremely uncommon *A. septentrionale*. With the knowledge that this hybrid exists so precariously as a single isolated plant, I finished the weekend with the notion of having (another) go at making *Asplenium* hybrids artificially, by co-culturing the gametophytes of parental species. With nine British parental species of *Asplenium*, one would have to plan a large checker-board of combinations to produce all of the 13 interspecific hybrids (A.C. Jermy & J.M. Camus, *The Illustrated Field Guide to Ferns and Allied Plants of the British Isles*, 1991), let alone setting up the pairs of species not yet observed to hybridise. Maybe there is someone in the Society with such a programme already in hand? If so, it would be good if we had news of it.

'FOR THE LOVE OF MONSTROUS FERNS' – RHS GARDENS, WISLEY, SURREY – 3 November (Leader: Jennifer Ide)

Jennifer Ide *et al.*

On a beautiful sunny day, with the Gardens at their autumn best, 30 BPS members and eight RHS staff gathered in the Hillside Events Centre at the Royal Horticultural Society (RHS) Gardens at Wisley for a meeting centred on the donation of the BPS Herbarium to the RHS.

John David, Senior Botanist of the RHS, welcomed participants to the Gardens and explained the importance of the BPS herbarium to the RHS, in whose herbarium ferns generally were under-represented, which limited the potential of the collection for identification and research.

The BPS joined the Royal Horticultural Society in 1920 and has been a fully paid up affiliated society ever since – 87 years! Jennifer Ide outlined the BPS's varied connections with the RHS during this time as seen through the Minutes of the Society. Two subjects frequently recur: the need to recruit more members and the need for a code for the naming of cultivars. The RHS fortnightly shows (now monthly) were seen as prime opportunities to bring the "the fern cult – and our Society – before the gardening public", and attract new members. Displays were arranged on a number of occasions from the 1920s to 1968, winning the Lindley Medal on two occasions. From 1959 to 1996 several attempts were made to draw up a code for the naming of fern cultivars and to define cultivar groups, the last attempt being at the invitation of the RHS. But on each occasion it appears to have proved a task too great for the Society to tackle on its own.

Chris Whitehouse, Keeper of the RHS Herbarium at Wisley, gave a talk on 'The Horticultural Herbarium'. He pinpointed three main purposes of such a herbarium: for plant identification, to serve as a historical record (of events, people and places), and to act as a statutory repository for botanical 'types' and their equivalent horticultural 'standards'. He indicated the differences between botanical and horticultural taxonomy, such as the use of images and the recording of colour – much more important in cultivar than in species recognition. Some plant groups contain enormous numbers of cultivars, topped by camellias with a staggering 32,000; fern cultivars were estimated at 'only' 650! Chris went on to outline the history of the RHS herbarium, which included the sorry tale of the first one being sold as a result of financial difficulties, and so lost. (This parallels the BPS in that I think our first herbarium was also lost!) The present collection includes specimens obtained from nurseries, RHS trials, National Collections, members, donations, and RHS expeditions. It is an essential facility used by botanists, acting as a repository for Nomenclatural Standards, serving as a permanent record of plant trials and awards, and maintaining an image library for plant portraits. [Paragraph author: *Graham Ackers*]

Graham Ackers, reporting on 'The BPS Herbarium at Wisley' explained that there is no evidence of the original BPS herbarium in the material donated to the RHS, a total of 764 specimens in six collections, mainly of cultivars of British species. The main advantages of the donation were an opportunity to mount or remount the specimens where necessary (mainly by Jennifer Ide), and the vetting of the names and the databasing of the collection (by Graham Ackers), thereby enabling greater accessibility and availability to RHS botanists and other researchers. A BPS number allocated to each specimen will allow the identification of the BPS material in the future. Graham reported that the collections of Martin Rickard, as well as some cultivar specimens presently housed at the Natural History Museum, are also to be donated to the RHS. He finished by suggesting how the BPS might work to fill the gaps in the RHS collection.

Martin Rickard completed the morning's programme by illustrating and, in his own inimitable way, commenting on the history and garden-worthiness of cultivars (monstrous ferns!) nominated by participants as their top ten favourite and five least favourite cultivars.

Asplenium scolopendrium 'Crispum Bolton's Nobile' and *Athyrium filix-femina* 'Victoriae' topped the survey equal first, with *Dryopteris affinis* 'Cristata Angustata' running a close second. Several cultivars appeared as both favourite and least favourite ferns and there were some surprising omissions from the list.

The accession of the BPS herbarium into the Wisley collection highlighted the nomenclature problems for fern cultivars and was the motivation for the afternoon sessions devoted to the subject of cultivar standards and the registration of cultivar names.

John David gave a rapid but lucid summary of this complex state of affairs. He began by outlining the differences between the *International Code of Botanical Nomenclature* (ICBN) and the *International Code of Nomenclature for Cultivated Plants* (ICNCP). He described the concept of Registration, including the founding principle of promoting uniformity, accuracy and stability in the naming of cultivated plants. He described how the ICNCP relates to other statutory and non-statutory systems such as Plant Breeders' Rights and 'Selling Names'. Then he outlined the functions of the Registrar, the importance of publishing lists of accepted names and detailed the process of registering them. He described how to maintain a set of 'Standards' – which can be type specimens, paintings or photographs of the cultivar – and concluded that it may be possible to designate some fern cultivar Standards from the BPS Herbarium. [Paragraph author: *Roger Golding*]

Michael Grant, a member of both BPS and RHS, continued the theme of registering cultivar names. He explained that it would be possible under the ICNCP to have a register of fern cultivar names. However, it would depend on a Registrar being found who would take on the task of checking the validity of proposed names and compiling a register. Mike took us through a quick history of the naming of fern cultivars, and how the system had improved with the nomenclature rules established by the 1953 and 1959 editions of ICNCP. Naming fern cultivars in future might be easy in some cases, for example, cultivar groups such as 'Divisilobum Group' would be allowed, whereas quasi-Latin names, such as 'Iveryanum', would not. As with the names of species, the registration of cultivars depends on establishing the first occurrence of a published name complete with a useful description (which, for ferns, could be difficult to track down in early documents and may not even exist). [Paragraph author: *Bryan Smith*]

A forum of four panellists drawn from the team of speakers and chaired by the BPS President, Robert Sykes, examined the question '*Where do we go from here? Is there a role for the BPS?*' After discussing several problems raised by speakers, it was generally agreed that the registration of fern cultivar names was desirable and that the BPS was the obvious organisation to be the registering authority. However, the task of setting up the registration scheme was a mammoth one, and the guidance and support of the RHS would be required if it was to be achieved and succeed. To avoid the collapse of the project as in previous attempts, it was suggested that a 'road-map' be drawn up of bite-size chunks of work, each of which could be seen as achievable. A small working group with BPS and RHS representatives was formed to plan the project.

To finish the day, Jennifer Ide looked ahead towards 'filling the gaps' in the Wisley herbarium. She outlined draft guidance notes, prepared in consultation with Chris Whitehouse, on the submission of fronds for the RHS Herbarium and demonstrated a few pointers such as the advantage of rolling fresh fronds in bubble wrap and a template for the folding of fronds too long for the herbarium sheets.

It was generally agreed that it had been an interesting and useful day, enjoyed in lovely surroundings with an exciting new glasshouse to view, and that the support offered by John David on behalf of the RHS would hopefully enable the BPS to realise its long-time dream to become the registrar for the names of fern cultivars.

REGIONAL MEETINGS

YORKSHIRE FERN GROUP

Clapham & Trow Gill, near Ingleton, North Yorkshire – 25 November 2006

Alison Evans

Our November *Polypodium* meetings are not usually noted for good weather, but this year we were lucky and had a mild, dry day despite forecasts of gales and heavy rain. Five of us met in Clapham (car park 34/745692) and started by the river in the village, finding *Polypodium interjectum* on garden walls, and growing luxuriantly on the river bank with *Asplenium scolopendrium*, *A. trichomanes* subsp. *quadrivalens* and *Dryopteris filix-mas*. Bruce took a frond of a possible *Polypodium* hybrid from the river bank – a plant with very broad fronds, toothed pinnae and abnormal looking sori, but that also turned out to be *P. interjectum*. We walked up to the church and found *P. vulgare* on the garden wall opposite, then *P. interjectum* again on the wall just through the gate to the Clapham estate.

photo: A.J. Evans

Clapham, near Ingleton, North Yorkshire

Barry Wright, Frances Haigh, Ken Trewren, Bruce Brown

On the path by the lake, Ken showed us *Dryopteris affinis* subsp. *paleaceolobata* (34/749697), very glossy with twisted pinnules. *D. dilatata* was still green but most of the *Athyrium filix-femina* was brown and dying back, as was the bracken. There were some handsome specimens of *Polystichum aculeatum* and *Asplenium scolopendrium*. We were able to compare *D. borreri* with the '*robusta*' form (34/749698) as the two plants were growing side by side – the *robusta* being a very large plant with broad, overlapping pinnae. We also saw *D. affinis* and *D. borreri* growing together – the *D. borreri* looking paler than the darker, glossier *D. affinis*. We found *Blechnum spicant* by the path, and *Cystopteris fragilis* and *Asplenium trichomanes* subsp. *quadrivalens* on the stone arch 'folly'. There was an unreachable *Polypodium* on the top of the arch – probably *P. vulgare*. A little further on there were some nice clumps of *Asplenium ruta-muraria* growing on the rocks.

Once through the gate beyond Ingleborough cave entrance, we spent some time on the steep bank to the right (34/754711) looking for *Selaginella* but did not find any. The hillside was full of little waterfalls, very picturesque but very soggy underfoot. Once in Trow Gill we used the long snippers to sample a colony of polypodiums, which turned out to be *P. vulgare*. Further up the gorge we found colonies of *P. cambricum* on the left. At the top of the narrow part of the gorge we climbed up the bank to the rock-face and found *Asplenium viride*, in places growing in amongst *A. trichomanes* subsp. *quadrivalens*. We also found *Cystopteris fragilis* again, and *Polypodium vulgare* and *P. cambricum*.

Time for lunch – sitting on the grass in the sunshine, then back into the gorge to try out Bruce's extra, extra long snippers on what turned out to be more *P. cambricum*. However, very interestingly, one of these fronds was later confirmed microscopically to be the hybrid *P.* × *font-queri*. We had a brisk walk back down to the village, where we found an extensive colony of *Asplenium ceterach* on a garden wall (34/744693). We considered going on to another site, but the weather was changing and the light fading, so we decided to return another day.

Sinnington, near Pickering, North York Moors – 27 January 2007 Ken Trewren

The main purpose of this outing was to visit the recently discovered *Polypodium sinningtonense* in the North York Moors. It was discovered quite by accident, when Ken Trewren was asked by BPS member Vincent Jones to check a frond that he believed to be *P.* × *mantoniae*. The frond did indeed look like that hybrid, but examination of the sporangia under a microscope revealed the presence of paraphyses, and the numbers of indurated and basal cells were consistent with *P. cambricum*, so at the time of the outing it was thought that it must be that species, despite the atypical frond morphology. Although some abortive spores were present, the vast majority were good, so it was considered that the plant was not likely to be a hybrid. Only later, when a chromosome count revealed that the plants are hexaploid (*P. cambricum* is diploid), was it realised that it must be a new species.

Five hardy souls met on a bright, sunny winter's day in the pretty village of Sinnington (44/7485). As we were leaving the village a few plants of *Asplenium scolopendrium* were seen growing in a limestone wall. After a walk of about half a mile northwards along the river bank, we picked our way carefully down the very steep bank to where a colony of *P. sinningtonense* was growing on a mound just above the water level. The fronds of this particular colony looked more like *P. interjectum*, being oval in outline, relatively narrow and fairly leathery in texture, and were somewhat different from the other colonies.

photo: K. Trewren

John Wilson, Alison and Chris Evans and Bruce Brown examining one of the colonies of *Polypodium sinningtonense* near Sinnington, North Yorkshire

After much discussion on the strange morphology, we proceeded upstream, at times forcing our way through brambles and wild roses, but finding about 20 colonies of *P. sinningtonense* along a stretch of 80 metres, nearly all growing on outcrops of limestone. Most of them looked rather like *P.* × *shivasiae*, having a frond outline that was widest at or just above the base, a fairly leathery texture, and many were of an impressive size, suggesting hybrid vigour. Over the next 300 metres of river bank there were about 20 colonies of *P. vulgare* growing on tree trunks and rocky outcrops, and, towards the western end of the site, three colonies of *P. interjectum*.

Apart from the polypodies, the other taxon that was of significant interest was *Polystichum* × *bicknellii*, of which there were two plants, along with a few plants of *P. setiferum* and numerous *P. aculeatum*. A large boulder was home to a few plants of *Asplenium trichomanes* subsp. *quadrivalens*, and other common ferns noted were *Pteridium aquilinum*, *Dryopteris filix-mas*, *D. dilatata*, *D. affinis*, *D. borreri*, and more *A. scolopendrium* growing on the limestone rocks.

The day had been hard going through rough vegetation, but the final test was a very steep scramble up a section of river bank where there was a gap through the cliffs, a struggle that was rewarded by finding a single plant of *Blechnum spicant*, presumably growing where an accumulation of organic matter had created a small pocket of acidity in an otherwise base-rich environment.

Ken is in the process of writing a paper on the new species, which should appear in a future edition of the *Fern Gazette*.

Ingleton, North Yorkshire – 3 March — Bruce Brown

This meeting was exploratory in nature but proved to be successful pteridologically, as well as being scenically enjoyable with some spectacular limestone gorges and caves to wander through and admire. Ken Trewren had previously eyed up some possibilities in the Ingleton area, then Alison Evans and I made some reconnaissances. After our first date was cancelled due to snow we finally got together at Ingleton with our first venue being the limestone gorge at Easegill Force above Jenkin Bridge (34/709728). Permission was gained at the farm, this not being access land. *Asplenium trichomanes* subsp. *quadrivalens* and *A. ruta-muraria* were seen on the roadside walls and further up the beck side along with old fronds of *Dryopteris filix-mas* and *D. dilatata*. As we reached the gorge itself high limestone crags and a spectacular waterfall pouring through a natural arch got our cameras clicking. Polypodies were prolific – *Polypodium vulgare* along the wall top at the bottom of the gorge, followed by *P. interjectum* on the rock outcrops higher up. Then jubilantly we discovered a good colony of *P. cambricum* on the highest crag overlooking the fall pool. *Polystichum aculeatum* and *Asplenium scolopendrium* also abounded. A few polypodies above the fall were checked for hybrids but none were found.

We drove up the B6255 to Chapel-le-Dale, calling at a parking area en route (34/718751) to clock more *Polypodium interjectum*. After lunch by the little church of St Leonard's we walked up to Weathercote House to seek permission to botanise, signing the visitors' book to receive a key to access Weathercote Cave (34/739775). The gate in the wall led us into a veritable paradise of awesome proportions, clothed with trees, ferns, mosses and *Saxifraga spathularis* hybrid. There was a hundred-foot drop down into a huge cave into which a large waterfall was pounding noisily. Some steep slippery steps enabled us to scramble down into the dimly lit bottom of the cave filled with a continual misty rain. Here no ferns grew, only mosses covering all the rock surfaces. What a place for filmies we thought, had it not been limestone. High up near the rim and above the waterfall was the favoured polypody location with luxuriant fronds hanging down from the rocks and epiphytically from the tree trunks. Totally unreachable, but through binoculars it was thought to be *P. interjectum*. On our climb back up, a solitary *Polystichum setiferum* was noted amongst the many *P. aculeatum*. One or two hybrid possibilities were considered but not confirmed.

We continued downstream to Jingle Pot (34/738774) passing more *Polypodium vulgare* and *Asplenium viride* on the way, and eventually reached Hurtle Pot (34/737772). Both pots were deep vertical chasms well festooned with polypodies around their rims. *P. interjectum* was prominent with *P. vulgare* also present. No hybrids were discovered. Another solitary *Polystichum setiferum* was found at Hurtle Pot.

Our final call was at Gargrave on the way home to view the healthy *Asplenium ceterach* colony on the canal bridge (34/931544) and Ken fished out a couple of dead fronds of *Cystopteris fragilis* from the lock wall. *A. ceterach* also grows on the main A65 roadside overhanging the river bank and has fortunately managed to survive the recent road improvements. Our local member Martin Harrison kindly invited us in for a welcome cup of tea before we finally left for home.

Moonwort surveys, North York Moors & Teesdale – 12 & 19 May — Barry Wright

This year we decided to revisit one of the more productive roads in the North York Moors National Park (NYMNP) as well as moving further north than previously, into Teesdale, to look for new locations. It was to prove interesting, to the point of being puzzling, to go back to the 'old stamping

grounds' and see if there were still colonies of moonwort (*Botrychium lunaria*) in the same locations, or if we found new colonies or even complete absence from former locations.

The chosen section of road in the NYMNP on the 12th May was the section from Lealholm towards Rosedale between approximately 45 74697-05672 and 45 74582-00077. We were able to complete this entire section in one day using our band of now very expert moonworters (sounds better than moonies!) who are also equally skilled as 'adder's tonguers'. The results showed that there were some areas where the colonies had clearly persisted and records were made of the same species (moonwort or adder's tongue (*Ophioglossum vulgatum*)) in approximately the same locations as in previous years. But there were puzzling instances where extensive new colonies were found and also where former good colonies were not re-found. This could just be a function of timing in that we may have been slightly earlier or slightly later in different years and have either just caught, or just missed the emergence. Or we may have been too late and the sheep got there first. It is the new records that are most intriguing. If we can assume that former records that did not appear in 2007 are still there, but were just 'hiding' from us, then the new records for 2007 could suggest that if we keep doing repeat surveys we may gradually increase the number of records and locations each year. We may find that the entire road verge is effectively one massive colony that only varies in the number and location of spikes that appear each year. This is worth investigating. It was also a feature of 2007 that there were generally more records of adder's tongue than previously. It remains intriguing that we never record close intermixing of both species. Colonies may seem close, but not an intermixing of spikes in a given patch. Too many questions and not enough answers!

Alison Evans re-found the colony of adder's tongue that Alastair Wardlaw recorded as 500+ spikes in 2004. I could have been cruel and kept quiet while she unknowingly and laboriously began counting every individual spike 1, 2, 3, 4, … 22, 23, 24, … 50, 51, 52. But I gave in and stopped her, or we would have been late for lunch, so we estimated 530 and moved on.

The other area we ventured into was Teesdale (Durham) on the 19th May. Colonies are well known from parts of the National Nature Reserve, but we wanted to see if there was a similar association with roadside verges. We looked at a number of sections from Langdon Beck to Cow Green Reservoir. These were from 35 84660-30955 to 35 81150-30815 and the metalled road from Cauldron Snout to the Cow Green Reservoir car park from 35/81730-29825 to 35/81195-30855. The latter section started at the well known colonies at the weather station.

The first section was not promising as the northern parts were too acidic and generally not suitable. However, we did get the only records of adder's tongue here at 35 83745-31044 (30 spikes) and 35/83781-31048 (one spike). These were high altitude records at over 400 metres. After crossing the cattle grid the grassland became more typical and odd records were made all the way to the car park next to the reservoir. The section from the weather station to the car park was also well supplied with records, although these were all of moonwort.

Horton Bank Country Park & Dowley Gap, Bradford, West Yorkshire – 9 June

Brian Byrne

On a sunny day seven members assembled in the car park of Horton Bank Country Park (44/127309), which was a mid-Victorian reservoir 160 metres above and only four kilometres from the centre of Bradford. After the disastrous failure of a similar aged Italian earth dam, the reservoir was effectively emptied, and the site opened as a small country park ten years ago. Ferns were abundant on the stone-clad sloping sides of the old reservoir, mostly male fern (*Dryopteris filix-mas*), broad buckler fern (*D. dilatata*) and lady fern (*Athyrium filix-femina*), but thinly scattered among these were scaly male ferns (*Dryopteris affinis* agg.). Unfortunately, our visit was far too early for identification within the scaly male fern aggregate, except to note that

two taxa were present. A notable find near the bottom of one slope was a small, sickly-looking soft shield-fern (*Polystichum setiferum*) (44/1263 3099). In the wet area at the bottom of a more wooded slope to the west (44/125309) was a mixed colony of horsetails. Water horsetail (*Equisetum fluviatile*) was plentiful and extended up the wet slope under the trees, but the dominant plant was the hybrid shore horsetail (*E.* × *litorale*). Common horsetail (*E. arvense*) grew alongside the path through the wet area at the top of the slope, above the main colony.

Our pub lunch was had alongside the Leeds/Liverpool canal at Dowley Gap (44/118384) near the world heritage site of Saltaire. Suitably sated, we set off and immediately found common maidenhair spleenwort (*Asplenium trichomanes* subsp. *quadrivalens*), a colony of over 70 plants on the wall adjoining the humpback bridge opposite the pub. The double rise lock at Dowley Gap (44/120383) was surprisingly rich in fern species. Where the canal narrows at the top, a single small specimen of brittle bladder fern (*Cystopteris fragilis*), a very rare fern in West Yorkshire, was growing only a few inches above the water. Just inside the lock were a few plants of maidenhair spleenwort, but most ferns grew on the north wall, facing south in full sun. We crossed over to get a closer look and saw male fern, lady fern, hart's-tongue (*Asplenium scolopendrium*), and wall rue (*A. ruta-muraria*). In 2001 a friend spotted a single small rustyback fern (*A. ceterach*) here, another rare plant for this area; four sporelings were seen in 2003, and we now counted nine to 11 plants within a few feet of each other, plus an outlier 15 yards away on the lower of the two rises.

Moving on, we found wall rue, male fern, lady fern and notably a single plant of black spleenwort (*A. adiantum-nigrum*) (44/122382), all growing above the water at the edge of the towpath on '7-Arches', the aqueduct carrying the canal over the river Aire. From here we took the riverside footpath and stopped above the recently reported site of a hard shield-fern, but considering the potential danger of venturing down, the bank erosion, and the likelihood that the plant had been washed away, we walked on. The woodland here is a very narrow elongated strip on mostly sloping ground, but where the woodland floor flattens out it can get very wet. Broad buckler fern was predominant, but both male and lady ferns were present, and alongside the footpath near the end of the woodland there was a colony of common horsetail. The fern on a log that we thought might be *Dryopteris* × *deweveri*, was found from its spores collected on a return visit, to be just a depauperate *D. dilatata* in a tantalisingly ambiguous guise. Crossing the river we rejoined the canal at Hirst Wood lock (44/132382), where we noted wall rue, male, broad buckler, lady and hart's-tongue ferns. But the star attraction here was black spleenwort, an uncommon plant of old walls in West Yorkshire, and supposedly known on this lock for 150 years. The stroll along the towpath back to our cars ended a very enjoyable fern day.

Bawtry Forest, South of Doncaster, South Yorkshire – 21 July — Alison Evans

This meeting was a follow-up of a brief trip to Bawtry Woods by Ann Robbins and Alison Evans with a party from Doncaster Naturalists in 2006, when we found several plants of *Dryopteris* that we were uncertain about. We were again very fortunate to be guided by Louise Hill and Pip Seccombe from the Naturalists, and also fortunate that we had very little rain, although the ground was very wet. We met at the car park (43/634949) and in the morning we mainly went along tracks that are open to the public. Heading east to 43/637949 we saw *Dryopteris dilatata*, *Athyrium filix-femina*, *Pteridium aquilinum* and *Oreopteris limbosperma*.

As the ground became wetter we found *Blechnum spicant*, more *Athyrium filix-femina*, and a young specimen of *Dryopteris borreri*. There was more *Oreopteris limbosperma* and a little further into the undergrowth we found the first magnificent specimen of *Dryopteris affinis* growing on the side of what is usually a dry ditch, but this year was quite a respectable stream. Moving further into the wood we found six more large plants of *D. affinis*. Down a side path we found a red-stemmed *Athyrium filix-femina*. There were also a few plants of *Dryopteris filix-mas*.

After rejoining the main track we walked a bit further afield, with frequent stops to look at flowering plants and grasses, until we came to a small clearing where there were several plants of *Dryopteris carthusiana* (43/626946) plus the hybrid *D.* × *deweveri* amongst plants of *D. dilatata*. We stopped for lunch at this point, and then retraced our steps before leaving the path to wade through shoulder-high bracken to the 'moat' – a wet area surrounding a central island of high ground, though we weren't certain why this had been constructed. There was plenty of non-ferny interest here, and there were massive specimens of *D. dilatata* and *Athyrium filix-femina*, but sadly no *Osmunda*. We were also surprised not to find any equisetums. After leaving the moat we went cross-country again to reach a wet area near a stream with a large stand of *Dryopteris carthusiana*, and more of the hybrid *D.* × *deweveri* (43/628943) and *D. dilatata*. This area also had *D. filix-mas* and *Athyrium filix-femina*. On the bank of the stream we found another large specimen of *D. affinis*, and a small stand of *Equisetum arvense* (43/627943). Again there were many flowering plants to distract us, and as the weather continued to be kind, we botanised for the rest of the afternoon. Again, many thanks to Pip and Louise for guiding us, and to Sir Jack Whitaker for allowing us on to his land.

Helmsley area, North Yorkshire – 18 August **Bruce Brown**

Our first objective on this visit to the North York Moors, led by Ken Trewren, was to see the one and only plant of *Dryopteris expansa*, which had been recorded by Ken and confirmed by chromosome count a year or two back. It turned out to be a large well established specimen with bright yellowish-green fronds and it clearly stood out amongst the sea of *Dryopteris dilatata* in the coniferous plantation of Roppa Wood (44 590910). It seemed odd that no other plants or even hybrids with *D. dilatata* have been found despite diligent searching by Ken. A few colonies of *D. carthusiana* were also present in the wood along with occasional *D. filix-mas*, *Athyrium filix-femina* and *Blechnum spicant*.

We spent an hour on the moor above, where there is a 140-year old record for *Diphasiastrum alpinum*, but there were no signs of it now in this man-managed environment of regular heather burning. The ditch alongside the forestry track gave us a few more pteridophytes – *Dryopteris borreri*, *Oreopteris limbosperma* and *Equisetum arvense*, but old records for *Pilularia globulifera* and *Selaginella selaginoides* were not refound.

On our return we saw a nice plant of *Dryopteris borreri* in its *foliosum* form near the *D. expansa* site. We also looked at the *Pteridium aquilinum* here. Some plants had long patent white hairs around the ends of their unfurling pinnae and virtually no brown hairs, which Ken identified as *P. aquilinum* subsp. *atlanticum*. There is a better stand of it near Moor Ings Bank (44/518878), which we tried to reach later on in the afternoon but time and deteriorating weather was against us.

The lure of the fish and chip shop in Helmsley at lunch-time was too much to resist, but we did make time to look at a fine mural display of *Asplenium adiantum-nigrum*, *A. trichomanes* subsp. *quadrivalens*, *A. ruta-muraria*, *A. scolopendrium* and *Polypodium interjectum* in Cleveland Way in the town centre (44/611839).

We drove along narrow lanes to Hawnby, noticing that all the bridges had been recently repaired after the flash floods, and parked at Arden Hall (44/519905). On the steep hillsides above the woodland zone were small outcrops of Jurassic limestone, which have weathered into undercut ledges where calcicolous ferns can thrive, just out of reach of the hungry sheep. Old records for *Asplenium viride* have been refound by Ken and we saw several colonies with one particularly photogenic clump in Stoney Gill Hole (44 513901). Associates were *Cystopteris fragilis*, *Asplenium trichomanes* subsp. *quadrivalens* and *A. ruta-muraria*.

After our abortive mission looking for *Pteridium aquilinum* subspecies, we descended the steep v-sided valley of Stoney Gill Hole, which fully lived up to its name after the severe flood

erosion and also Ken's reputation of leading us into rugged terrain. But there were some nice clumps of *Polystichum aculeatum* to hang on to and plenty of normal *Pteridium aquilinum* lower down to wade through before returning through the woods to Arden Hall.

Barry & Anne Wright's garden, Tockwith, & Harlow Carr, Harrogate, North Yorkshire – 13 October **Bruce Brown**

We gathered at Tockwith to see Barry and Anne Wright's garden, which is crammed with ferns and includes a very comprehensive and enviable *Polypodium* collection. Anne had enticing specimens potted up for sale, which were too tempting for many of us to resist. We then transported ourselves to Harlow Carr Gardens in Harrogate for our group's AGM. After the formal business, Ken Trewren gave us an update on the current *Dryopteris affinis* situation using a collection of fronds to illustrate the differences (subtle to some of us). A number of interesting *Dryopteris* taxa cultivated by Ken were quickly snapped up by members, including plants thought to be the hybrid between *D. oreades* and *D. borreri*. With other ferny photos and videos to view, we all had a very interesting day.

Brodsworth Gardens, Doncaster, South Yorkshire – 27 October **Bruce Brown**

Our final visit of the season was to the English Heritage Brodsworth Gardens near Doncaster. We had been invited by their Head Gardener, Dan Booth, to look at the Eric Baker fern collection, which is now to be found in a restored Victorian fern dell. Dan was seeking help with correct identification so that the collection could be properly labelled and catalogued, as his predecessors had not left any records. The ferns looked really at home on the tiered banking and consisted of many *Polypodium* and *Polystichum setiferum* cultivars as well as a good range of other ferns. After six years a lot of natural regeneration was taking place, so providing a challenging exercise in identification but, thanks particularly to Barry Wright's efforts, many labels were written out. Near the dell is a corner of the quarry with a picturesque group of mature *Dicksonia* and an understorey with more Eric Baker ferns – very nice! The work at Brodsworth is moving towards a really great visual display with the accent being to restore the garden as it was in its heyday of 1860.

SOUTH-EAST

Royal Botanic Gardens, Kew, Surrey – 26 May **Paul Ripley**
(Leaders: Pat Acock & Nigel Rothwell)

Fourteen members and guests met at a cool and damp Kew for a joint meeting with the East Anglia regional group. We were pleased to welcome a member new to the South-East group – Richard Lewis.

Under the expert and helpful leadership of Nigel Rothwell, we visited the tropical and temperate greenhouses dedicated to fern culture. The ferns were healthy and well grown in their 'state-of-the-art' environments. Emphasis was on display, and *Aglaomorpha*, tree ferns, *Lygodium* and a scrambling *Selaginella* were particularly impressive. We were particularly struck by a silvery, furry small unidentified pinnatifid fern which could have been a *Polypodium* or even a *Ctenopteris*. Nigel next showed us the alpine nursery where we were delighted to see *Asplenium marinum* growing in the brickwork on the outside of some of the cold frames. *Polystichum tripteron* also impressed. We next visited the Princess of Wales Conservatory, which was looking good, with beautiful ferns growing well. *Asplenium oceanicum* especially caught my eye. We also paid quick visits to the Palm House and the Evolution House (*Equisetum giganteum*) but not before seeing the woodland garden. *Stegnogramma mollissima* was doing well here and appeared to be completely hardy.

We are very grateful to Nigel for his excellent guidance and information. With his recent (and highly deserved) promotion and Peter Edward's imminent retirement, I do hope that expertise in the culture and conservation of ferns at Kew is not lost. The ferns we saw were well grown and healthy, although a more limited range of species is now maintained.

Gernon Bushes & Coopersale Fields Woods, Epping, Essex – 16 June Pat Acock

Seventeen members and friends from the SE and East Anglian groups, including Ken Adams, the BSBI vice-county recorder for Essex, met in this northern part of Epping Forest. Out leader for the day, Howard Matthews, gave us a very informative talk on the area and added to this during the course of the meeting. Much of the forest is now substantially grazed by muntjac and fallow deer that are becoming ever more numerous but this corner is not so badly affected. We started at Gernon Bushes (52/478029) and early arrivals went to see a long established site for *Asplenium adiantum-nigrum* on the old railway bridge in the High Street, as well as looking at a collection of hardy ferns in a private garden in Garnon Mead.

After recording *Pteridium aquilinum*, *Dryopteris filix-mas* and *D. dilatata*, we were rewarded with an extensive colony of *Thelypteris palustris*, which is an uncommon and diminishing plant in SE England. We added *Dryopteris borreri*, *Equisetum telmateia* and *Athyrium filix-femina*. On the stream bank we came across a crested *D. filix-mas*. We were then shown a second, even larger site for *Thelypteris palustris* before someone sought out *Dryopteris carthusiana* to end the morning session. Lunch at the Garnon Bushes pub was recommended justifiably.

In the afternoon we proceeded a little way south along the B181 to the woods surrounding the Woodyard car park (52/470130). After spotting a diminutive polypod we moved on to an area of gravel pits where we were intrigued by the two horsetails present, which turned out to be *Equisetum palustre* and *E. arvense*. We now added *Asplenium scolopendrium*, *Blechnum spicant* and *Dryopteris affinis* to our list. Further on, close to the old railway line and along its banks, we were able to find two large groups of *Polystichum setiferum*.

After all this our leader furnished us with many unusual *Dryopteris* sporelings from the boot of his car, many of which originated in the Indian Sub-continent. We thanked Howard for a well researched and interesting day in this rather special ancient woodland.

East Kent – 22 September Paul Ripley

Eight members and guests met at Farthing Common, with its marvellous views along the North Downs Scarp and across Romney Marsh, to explore some surprisingly remote by-ways in what remains of Lyminge Forest. Our number included Joan Bingley, who I hope we will see at other meetings in the future. A species list is appended, and only brief descriptions of the sites follow.

Site 1: Road east of Bossingham, 61/156489. In scrubby woodland beside the road, where small chalk heaps retained moisture, was probably the largest colony of *Polystichum aculeatum* in south-east England. *P. setiferum* replaced *P. aculeatum* on the other side of the road. Also here we found *Dryopteris borreri*, and a likely candidate for *D.* × *critica* (*D. borreri* × *D. filix-mas*).

Site 2: Cover Wood, near Lynsore Court, 61/173488. We found *Dryopteris carthusiana* here, as well as the more common ferns, and a very photogenic and 'classic' *D. affinis*. Ferns with foliose and twisted pinnules may have been *D. affinis* subsp. *paleaceolobata*.

Site 3: Road near Bladbean, 61/172470. Approached via a gated road from Site 2, the roadside verges here were of interest. *P. aculeatum* grew in the more open spots, while lower down where it was more shaded, *P. setiferum* was abundant unusual for a Kent lane – with *Asplenium scolopendrium*. We also found *Dryopteris carthusiana* at this site.

Site 4: Elham Park Wood, 61/166159. This wood, now managed by Forest Enterprise, is very close to the well known Park Gate Nature Reserve where orchids (and *Ophioglossum*) are supposed to be abundant in spring. This area really is a delightfully unspoilt backwater although the roadside verges have been massacred by forestry operations. *Dryopteris affinis* was managing to survive, and unusually we found both *Polystichum setiferum* and *Blechnum spicant.*

Site 5: Park Wood, near Bonnington, 61/043358. After lunch, we moved on to the Greensand ridge above Bilsington. Our approach was via a portion of the Saxon Shore Way, which marks the coastline as it was before the reclamation of Romney Marsh. This was acid woodland, and in a boggy area we found *Blechnum spicant* and *Dryopteris carthusiana*, among other species. In spite of the abundance of both *D. carthusiana* and *D. dilatata*, we failed to find any *D.* × *deweveri*. Lower down, along a small stream-bed, the two *Polystichum* species were again found.

Some members left at this point, while others enjoyed tea at The Old Rectory in Aldington, where the view over Romney Marsh was again admired.

Ferns seen during South-East meeting in East Kent, September 2007

Species	Site 1	Site 2	Site 3	Site 4	Site 5
Asplenium scolopendrium			✓		✓
Athyrium filix-femina				✓	✓
Blechnum spicant				✓	✓
Dryopteris affinis		✓		✓	
D. borreri	✓	✓			
D. carthusiana		✓	✓		✓
D. dilatata	✓	✓	✓	✓	✓
D. filix-mas	✓	✓	✓		✓
Polypodium interjectum				✓	
Polystichum aculeatum	✓		✓		✓
P. setiferum	✓		✓	✓	✓
Pteridium aquilinum	✓	✓	✓	✓	✓

Hayes Church, South Park Woods & Petts Wood, North West Kent – 20 October

Pat Acock

We met at Hayes Church, Kent (51/405663) at 10.30 to admire the limestone wall outside. This has been known for some time to have the largest colony of *Asplenium ceterach* in south-east England. Members who were seeing the wall for the first time were enthralled by the quantity and size of the plants. We also saw *A. trichomanes*, *A. scolopendrium* and *Dryopteris filix-mas*, but surprisingly no *A. ruta-muraria.*

As it was between our two morning sites, I had also agreed at short notice to do a quick survey for Tabitha Nelson of her wood in South Park, Holwood Estate (51/421642). Tabitha knew that her wood contained many ferns but, with only a fire-damaged copy of *Grasses, Ferns, Mosses & Lichens of Great Britain and Ireland* by Roger Phillips for reference, had not been able to identify all the species. Members quickly confirmed that she had been right about there being a good selection of ferns, finding *Dryopteris filix-mas*, *D. dilatata*, *Asplenium scolopendrium*, *Polystichum setiferum*, *Athyrium filix-femina*, *Dryopteris borreri*, *D. affinis* and *Pteridium aquilinum* on the remains of this old iron-age fort.

photo: P.J. Acock

Hayes Church, Kent

Paul Ripley, Karen Munyard, Jack Hubert, Steve Munyard, Lesley Williams, Graham Ackers, Roger Golding, Gerry Downey, Howard Matthews

At Petts Wood (51/447683) we saw *Pteridium aquilinum*, *Athyrium filix-femina*, *Dryopteris filix-mas* and *D. dilatata* in amongst a large stand of *D. carthusiana*. Standing majestically on a stream side was a *Dryopteris affinis* well over six feet in height. Further around the wood we re-established the record of an alien colony of *Onoclea sensibilis*, growing ever more strongly each year.

At the Acock's, guided tours of the fern patches took place either side of lunch. Slide-shows by Paul Ripley, Steve Munyard, Howard Matthews, Roger Golding and me presented our ferning year, including the BPS Texas tour and BPS meetings in Nice Alpes Maritimes and North Wales, as well as personal outings (including Colombia!).

EAST ANGLIA

Indoor Meeting, Little Thurlow, Suffolk – 20 January **Marie & Geoffrey Winder**

Once again, Mary Hilton welcomed us to her home at Little Thurlow for our January meeting. This year the group's retiring organiser, Barrie Stevenson, told us about his six-week visit to New Zealand in 2005. Barrie's talk, illustrated by numerous excellent photographs, was not just about ferns but also about the many other plants he saw, and about the towns, parks, gardens, terrains and countryside he visited, making it difficult to do it justice in this relatively short report.

His visit started at Christchurch, an attractive town in the South Island with many older buildings, and plants such as tea trees (*Leptospermum*) and *Pseudopanax ferox* growing along the streets and in gardens. He was very fortunate in that he was able to meet up with several people able to show or suggest places of interest for him to visit. He headed south across the Canterbury Plains towards Dunedin and the Otago Peninsular and then worked his way north, crossing the Southern Alps and visiting the west coast. Plant growth was luxuriant with lots of tree ferns, sometimes in beautiful stands. He saw filmy ferns and *Leptopteris superba*, a *Lycopodium* and the ferns *Sticherus flabellatus*, *Blechnum discolor* and *B. novae-zelandiae*. His visit to South Island finished in the area around the town of Nelson, which is in a conservation area and retains many wooden buildings. British plants were quite common in gardens, while *Jacaranda* and red or pink forms of *Eucalyptus* occurred both along the streets and in gardens. *Ophioglossum coriaceum* and *Blechnum fluviatile* grew in the west of the area.

Barrie caught the ferry from Picton to North Island, which in contrast to South Island has much terrain of a volcanic nature. He headed north towards Auckland via the New Plymouth area on the south-west coast and saw tree-fern stumps from cleared woodland being used as fencing and sometimes starting to grow. He mentioned that the large fern

Marattia salicina had become rare, as its starch-rich roots are eaten by pigs. Peter Richardson, a former member of the East Anglia group who now lives near Auckland, took Barrie on a tour of various interesting areas including the Kaimai range, where they saw *Asplenium polyodon*, and an area in the north where Kiwi fruit is an important crop.

Many thanks to all who helped with the meeting, particularly Mary Hilton and Dawn Winder. Congratulations Barrie on ten interesting years as our regional organiser, and thank you Tim Pyner for taking over.

Southrepps Common, near North Walsham, Norfolk – 7 July **Tim Pyner**

Seven members joined the leader Mary Ghullam at Southrepps Common (63/260351) on a warm and sunny morning. Mary is the honorary warden and explained the history and management of the area. The Common of 30 acres is all that remains of a much larger area. It is managed as a trust in partnership with Natural England. The major part of the Common is an SSSI, surrounded by a complex of smaller areas. It is a valley fen mire, the underlying chalk allowing the development of rich calciphilous flora. In places the pH is lower, the result being an interesting mix of base- and acid-loving plants. The management consists of cutting compartments on an annual or less frequent basis to prevent scrub encroachment and maintain the diversity.

The pteridophytes were not dominant but formed an interesting background to the rich variety of angiosperms. A stroll along a boardwalk revealed *Pteridium aquilinum* to be frequent in the more acid areas along with *Dryopteris dilatata*. *Equisetum palustre* was frequent and also occurred as small, unbranched stems in the areas of short, species-rich marshy grassland. Here it grew amongst a variety of orchids including fragrant (*Gymnadenia conopsea* subsp. *densiflora*), southern marsh (*Dactylorhiza praetermissa*) and marsh helleborine (*Epipactis palustris*). Mary pointed out two inconspicuous sedges, dioecious sedge (*Carex dioica*) and few-flowered spike-rush (*Eleocharis quinqueflora*), both rare and decreasing in Norfolk. Further on in a wooded area we saw *Dryopteris carthusiana* and some large *Athyrium filix-femina* along a stream. In another open area we managed to re-find *Ophioglossum vulgatum* amongst the long grass along with a couple of stunted *Dryopteris filix-mas*. Making our way back to the car park for lunch we spotted a few stems of *Equisetum fluviatile* in some standing water. Our final fern for the morning was *E. arvense* in the car park.

Mary was leading a group of batologists (bramble lovers) after lunch so after our goodbyes we set of to check some old walls in the area. At our first stop in Southrepps (63/256365) we found some nice colonies of *Polypodium interjectum* on the old walls and also a small *Asplenium scolopendrium*. We then went on to a couple of churchyards, firstly Antingham (63/252328) where we spotted *Asplenium ruta-muraria* and *A. adiantum-nigrum* high up on the church tower. The only fern at Felmingham was a small patch of *Polypodium interjectum* on the churchyard wall (63/251292). Our final stop of what was turning out to be a very hot day was at the old abandoned station at Felmingham (63/251286). Here we saw more black spleenwort and *P. interjectum*

photo: B.D. Smith

Looking at ferns on Antingham Church, Norfolk

Barrie Stevenson, Karen & Steve Munyard, Gill Smith, Tim Pyner

on the old platforms. Under blackthorn we also spotted a very large polypody that looked to be a possible hybrid. Later, on checking in the *Flora of Norfolk* I noticed *P.* × *mantoniae* recorded from Felmingham in 1972 so we may possibly have found the same plant.

I would like to thank Mary Ghullam for sharing her knowledge and experience in the morning and directing us to some interesting sites in the afternoon.

Stour Wood, Wrabness, & Gerry Downey's Garden, Frinton-on-Sea, Essex – 4 August

Bryan Smith

We always look forward to our annual joint meeting of the South-East and East Anglia Groups, as it gives us a chance to meet old (and new) friends and venture out of our 'home patches', and this lovely sunny day in August was no exception. A good sized group met at Stour Wood car park (62/192310) and headed off into the woods led by local expert, Jerry Bowdrey. This ancient woodland belongs to the Woodland Trust and comprises sweet chestnut coppice, intermixed with hornbeam and other tree species. Apart from *Pteridium aquilinum*, we soon came across *Dryopteris filix-mas*, *D. dilatata*, *D. carthusiana* and colonies of abundant *D. borreri*. Stour Wood must hold one of the largest populations of *D. borreri* in East Anglia. We also found scattered groups of *Blechnum spicant*, and fairly frequent colonies of *Athyrium filix-femina* confined to wetter areas. We had heard that *Polystichum* was to be found, but it took an excursion down to the River Stour foreshore and an eagle-eyed Tim Pyner to find *Polystichum setiferum* in a wet gully leading onto the foreshore. Our return trip to the car park kept the *Equisetum* fans happy when a small outcrop of *E. arvense* was spotted in the undergrowth.

After a picnic lunch by the woods, we drove to Gerry Downey's home and garden in Frinton-on-Sea (five miles north-east of Clacton-on-Sea). Gerry must have one of the most extensive fern collections in the country, so to try and do it justice in a written description is an impossible task. Not only does he grow ferns in his garden, he also propagates and displays them, particularly at the Alpine Garden Society shows where he is a regular prize winner. Gerry's particular passion though is *Polystichum* and in both the garden and his greenhouses he has some choice, unusual specimens. The last time I visited Gerry's garden (in 2001) he had just acquired a large pile of water-worn limestone. This has now been transformed into a dramatic limestone waterfall, and we were able to sit and admire this while partaking of tea and refreshments kindly provided by June, his wife. I started making a list of ferns (inevitably, ones I had not seen before) but gave up. Looking back on the list, just to whet your appetites, I noted *Polystichum retrosopaleaceum*, *P. plicatum* var. *elegans*, *Blechnum brasiliense*, *B. microphyllum* and *Coniogramme japonica* (variegated). This splendid day was rounded off by Peter Tindley producing several trays of unusual sporelings from the boot of his car; several of us took away little bags of these ferns to add to our own collections.

Autumn Indoor Meeting, Barrow, Suffolk – 27 October

Tim Pyner

Fourteen members and friends met for our regular autumn meeting at Geoff and Marie Winder's house in Suffolk. The garden, as always, featured many interesting ferns and other plants. As usual the attendees provided items of interest, books and photos. The latter consisted of pictures taken on various national and local BPS meetings during 2007 along with some additional non-BPS trips. These photos and associated commentary are always of interest, particularly for those who have not managed to attend all the meetings.

The usual splendid refreshments were supplied by Geoff and Marie and other members and a big thank you to Marie and Dawn for all their hard work preparing the food.

After ten successful years this will be the last time that we hold this meeting at the Winders, and I and the other members are very grateful for the time and effort that Geoff and Marie have contributed to ensure the success of these meetings.

NORTH-WEST

Bridge of Orchy, Argyll – 23-24 June

Bruce Brown

I was eagerly looking forward to this trip as it was a great opportunity to see some alpine ferns new to me. The other members of the party, Peter Campion, Frances Haigh and Ken Trewren, had similar thoughts and happily we succeeded in finding all the rarities we had hoped to see, thanks to the sound guidance of our leader, Robert Sykes, who had visited the area several years earlier with Heather McHaffie.

Our first day was spent in Coire Achaladair and under the crags of Beinn an Dothaidh. It is a steady climb up to about the 550-metre contour line to reach the zone where the montane ferns start to appear on the lower crag outcrops and boulder-scree. On the way from our start point at Achallader (27/322443) we had passed *Asplenium ruta-muraria* on the old castle wall, *Oreopteris limbosperma*, *Athyrium filix-femina*, *Dryopteris borreri*, *D. dilatata* and *Blechnum spicant* especially in the vicinity of the railway, then further up, *Pteridium aquilinum* and *Equisetum sylvaticum*. At a stream crossing Ken pointed out *Dryopteris cambrensis* growing alongside *D. filix-mas*.

Eventually we reached the montane zone and the first craggy outcrop we explored (27/333417) revealed the typical vegetation of these calcareous mica-schist rocks - *Cystopteris fragilis*, *Polystichum aculeatum*, *Asplenium viride*, *Selaginella selaginoides* and *Huperzia selago* along with roseroot (*Sedum rosea*), water avens (*Geum rivale*), lesser meadow-rue (*Thalictrum minus*), globeflower (*Trollius europaeus*) and yellow saxifrage (*Saxifraga aizoides*). It did not take long to find *Phegopteris connectilis* and *Gymnocarpium dryopteris* under boulders or in sheltered nooks among the rock outcrops. *Dryopteris expansa* became more prolific than *D. dilatata*. Clumps of *Diphasiastrum alpinum* and *Polypodium vulgare* were spotted.

The call of a peregrine falcon echoing round the corrie must have been a good omen as our next crag at about 620 metres revealed several specimens of *Woodsia alpina*. *Cystopteris fragilis* was growing close by so we could compare and contrast the differences between them. Our first *Polystichum lonchitis* was here, and also *Asplenium trichomanes* subsp. *quadrivalens* along with more *A. viride*. Ken was eyeing up the *Dryopteris expansa* and *D. dilatata* colonies for any likely hybrids and took some samples home for chromosome squashes. He later informed me that two specimens from this area (27/330414) had been confirmed as the triploid hybrid *Dryopteris* × *ambroseae*.

We gradually made more height as we worked our way westwards along the outcrops and across the boulder fields. *Polystichum lonchitis* became more abundant, with occasional *P. aculeatum*. One plant of *Cryptogramma crispa* was noted, a rarity amongst these basic rocks. We also came upon a few clumps of *Athyrium distentifolium* (27/327411) recognisable by their round sori lacking an indusium. The natural rock gardens of *Dryopteris expansa*, *Phegopteris*, *Gymnocarpium*, *P. lonchitis* and *A. distentifolium* all growing luxuriantly together amongst the boulders were a joy to behold. And the final delight of the day was to see two resplendent colonies of *Cystopteris montana* in their element up a steep vegetated gully not too far away.

On day two we returned to Achallader, as some of us had not seen the *flexile* variety of *Athyrium distentifolium*. From the Water of Tulla track we crossed the railway at 27/340448 then climbed steadily up to the unnamed corrie west of Meall Buidhe, which was one of Heather McHaffie's study sites described in 2006 *Pteridologist* 4(5). The ferns seen on the approach were much the same as on the previous day, with the addition of a *Dryopteris affinis* and clumps of *Polypodium vulgare* on the wall top near Achallader. *Equisetum palustre* grew in the peaty pools of the corrie floor.

It was amongst the scree and larger boulders above it that the montane ferns proliferated (27/354437) at an altitude of 650-700 metres. Here were lots of *Athyrium distentifolium* and *Dryopteris expansa*. Associates were *Oreopteris limbosperma*, *Blechnum spicant*, *Phegopteris connectilis*, *Gymnocarpium dryopteris*, *Equisetum sylvaticum*, *Dryopteris dilatata* and the occasional *D. borreri*. *Dryopteris oreades* replaced *D. filix-mas* and a few *Cryptogramma crispa* were spotted. Having 'got our eye in' we were then able to identify occasional clumps of *A. distentifolium* var. *flexile* with their narrower bipinnate deflexed fronds – very photogenic! A happy hour or two taking in these delights passed by before we decided to climb out of the corrie and traverse the slopes north-east to reach the next corrie holding Lochan a'Chreachain. The south-west corner (27/366445) was the most interesting for ferns, with most of the afore-mentioned species plus *Huperzia selago* and *Dryopteris cambrensis*. We split up to explore, Peter and I finding just one colony of *A. distentifolium* var. *flexile* in a gully not far below the crag base. Ken and Robert found an interesting imbricate form of *A. distentifolium* lower down.

After descending alongside the lochan's outflow stream we returned through Crannach, parts of which are remnants of the old Caledonian pine forest. A stand of *Pteridium* at 27 353458 reminded Ken of *P. pinetorum* subsp. *pinetorum*, which he had seen in its Aviemore location, but no definite conclusions were reached. Has it been recorded from this area?

Another discussion point was our impressions of the alpine lady ferns in the location discussed in Heather's *Pteridologist* article. We did find some blackened stumps indicating large old plants that had died off, but there was certainly no shortage of new growth, with fronds springing up everywhere in suitable locations amongst the boulders and scree. Occasional sori were found but most of the fronds were young so we were probably too early in the season to assess likely fertility.

This had been a fascinating visit to a lovely area of the Scottish hills.

Smardale Fell, Kirkby Stephen, Cumbria – 14 July **Roy & Denise Copson**

Smardale Fell in the heart of the Westmorland countryside consists mainly of Carboniferous limestone. Scandal Beck courses though the dale bottom. Scandal is Old Norse for short valley. The dale is renowned for its diversity of habits and its flora and fauna and has several conservation designations including National Nature Reserve. Our main objectives for the day were to see the pteridophyte floras of the boundary walls, the built infrastructure of the disused railway and a group of small quarries that supplied sandstone for the building of the railway viaduct in 1860.

Our party of eleven brave souls strode out along a walled bridleway from Brownber (35/701057) in cloudy, wet and windy weather for a day of excellent botanising, later on under blue skies. Our first encounter with ferns was on moss-covered limestone walls to both sides of us beneath a small spinney. Here was brittle bladder fern *Cystopteris fragilis*, hart's tongue *Asplenium scolopendrium* and maidenhair spleenwort *A. trichomanes* subsp. *quadrivalens*.

Shortly we arrived at Brownber Hall (35 705056), on the south-facing boundary wall of which was a mixed flora of mosses and lichens, ferns and flowering plants: wall rue *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens*, ivy-leaved toadflax *Cymbalaria muralis* and welsh poppy *Meconopsis cambrica*. The north-facing wall on the opposite side to Brownber Hall was clothed in moss and topped with common polypody *Polypodium vulgare*, with lady fern *Athyrium filix-femina* at its base.

Keeping to the bridleway we continued through the walled landscape under a clearing sky. We crossed Scandal Bridge and began to climb up Smardale fell from the south-east side of Smardale and soon arrived at the disused quarries. After lunch we began to explore the varied terrain, which provided numerous and varied habitats for ferns. The list of species

kept rose to a final total of eighteen: field horsetail *Equisetum arvense*, *Polypodium vulgare*, bracken *Pteridium aquilinum*, lemon-scented fern *Oreopteris limbosperma*, *Asplenium scolopendrium*, black spleenwort *A. adiantum-nigrum*, *A. trichomanes* subsp. *quadrivalens*, green spleenwort *A. viride*, *A. ruta-muraria*, rustyback *A. ceterach*, *Athyrium filix-femina*, limestone oak fern *Gymnocarpium robertianum*, *Cystopteris fragilis*, hard shield fern *Polystichum aculeatum*, male fern *Dryopteris filix-mas*, *D. borreri*, broad buckler fern *D. dilatata* and hard fern *Blechnum spicant*.

We departed from the quarries reluctantly and continued alongside the fell through its flower-rich grassland, admiring the dark green fritillary butterflies. This eventually brought us to the disused viaduct and railway line, where we turned our attention to the retaining walls, bridges, buildings and the viaduct itself. All these structures were built using lime mortar produced in the lime kilns on the construction site of the railway line. This mortar is now home to aspleniums, namely *A. ruta-muraria*, *A. ceterach*, *A. trichomanes* subsp. *quadrivalens* and *A. scolopendrium*. *Dryopteris filix-mas* and *Cystopteris fragilis* were also present.

We adjourned to admire a colony of fragrant orchids *Gymnadenia conopsea*, melancholy thistles *Cirsium heterophyllum* and field scabious *Knautia arvense*. In conclusion, we wish to say thank you to all our like-minded friends who shared their knowledge, enthusiasm and good humour with us despite the damp start.

Cumwhitton Moss & the River Eden, Cumbria – 4 August

Mike Porter

Cumwhitton Moss is situated in the lower Eden Valley a few miles south-east of Carlisle. It is an acidic valley bog with areas of old peat-cuttings and some extensive patches of dense tree cover, including possibly native *Pinus sylvestris* (Scots pine). Present management is directed at keeping much of the site open and, where feasible, reducing tree cover.

photo: M.S. Porter

***Thelypteris palustris*,**
Cumwhitton Moss, Cumbria

On a rather grey, damp day a group of nine BPS members met to have a look at the specialities of this site. A previous visit by the leader and Jeremy Roberts had ascertained that the chief attraction, *Thelypteris palustris* (marsh fern), was still present in good numbers but also that the recent wet weather and the growth of trees over the past few years had made access to the original site extremely difficult. However, a new site had been found by Jeremy much nearer the edge of the wooded area, which was much easier of access and it was to this that the group headed. On the way, good quantities of *Dryopteris carthusiana* (narrow buckler fern) were noted, growing with *D. dilatata* (broad buckler fern) and before long members were seeing plants that appeared to be the hybrid between the two – *D.* × *deweveri*. The plants that drew our attention looked like particularly large, robust *D. carthusiana*, generally lacking the 'shuttlecock' growth habit of *D. dilatata*. Our confidence that we had found this hybrid was later proved to be

well-founded, as microscopic examination by Bruce Brown showed that the spores of almost all the plants we had selected as hybrids were at least 90 per cent abortive. We moved on to the area just inside the woodland where a good number of plants of *T. palustris* were to be found, scattered around in a particularly wet area by a stream (35 512519). Their distinctive growth habit with fronds often arising well apart from each other and their pale green colour made them distinctive even in the gloom under the dripping trees. This is one of only three known sites for Cumbria – perhaps somewhat surprising considering the amount of suitable habitat to be found in the county. Having photographed and examined the fronds in detail we moved on to a more open area of the moss to admire a fine patch of *Vaccinium uliginosum* (bog or northern bilberry) and large quantities of abundantly fruiting *V. oxycoccos* (cranberry).

photo: M.S. Porter

Cumwhitton Moss, Cumbria

Peter Campion, Harry Kay, Frances Haigh, Harvey Shepherd,
Alison Evans, Robert Sykes, Bruce Brown

Having returned to our cars we moved on to our second site and, in somewhat brighter weather, had lunch (35/467552). The afternoon was spent walking through woodlands down to the River Eden and then following its western bank upstream. There is much of botanical interest along the course of the Eden, some of the plants growing here being distinctly uncommon in Cumbria, such as the *Tilia cordata* (small-leaved lime) admired by our group. The commonest polypody hereabouts is *Polypodium interjectum* (intermediate polypody), collected specimens being once again confirmed by microscopic examination by Bruce Brown. We also had the opportunity to compare *Polystichum aculeatum* (hard shield fern) and *P. setiferum* (soft shield fern), the softer texture, longer lowest pinnae and the obtuse-angled base of the pinnules nearest the rachis being the key distinguishing points for the latter species. *P. setiferum*, though rather more widespread in Cumbria than was thought even ten years ago, is much less common here than *P. aculeatum*.

Other species seen during our walk through the woods to and from St Constantine's cells (a series of square caves cut deep into the rock and probably used by the monks of Wetheral Priory) included *Dryopteris borreri*, *D. affinis* subsp. *affinis* and, of course, *D. filix-mas*. Finally, the stroll back to the cars provided *Asplenium scolopendrium* (hart's tongue) and some good specimens of *A. adiantum-nigrum* (black spleenwort) growing on red sandstone walls at Wetheral Priory Gatehouse.

Mike Hayward's Garden, Blundellsands, near Liverpool – 15 September

Peter Campion

Mike's garden is of modest size but every possible part is made use of in the cultivation of predominately the ferns that he grows so well. The location is not far from the sea but sheltered from the wind and fenced in all around. The layout includes pergolas, winding paths, running water, and places to sit and enjoy the sunshine.

We were welcomed with coffee and later had a guided tour around the garden, including the greenhouse and conservatory followed by individual browsing at leisure. There were many tree ferns: *Dicksonia antarctica* in quantity, *D. fibrosa*, *D. sellowiana*, *Cyathea australis*, *C. smithii*, *C. atrox*, *C. dealbata*, *C. medullaris*, *C. brownii* and *C. milnei*, as well as others in the greenhouse. As a newcomer to the Society, the writer of this report was quickly overwhelmed by the number of exotic ferns but enjoyed the varieties of *Polypodium cambricum*, *Blechnum wattsii* and many other *Blechnum* species, as well as the spectacular *Woodwardia unigemmata* growing close to the house.

photo: P.J. Campion

Mike Hayward with *Cyathea medullaris* in his garden

Mike had prepared a delicious lunch for us, which we ate in the sunshine to the music of water playing and the happy conversation of pteridologists enjoying themselves. After lunch we were given the run of Mike's lovely library and in particular his large collection of very fine Nature Prints from the eighteenth to twenty-first centuries. The details of how the various processes were developed in Victorian times so that a beautiful facsimile of a specimen could be reproduced on a commercial scale were explained for the uninitiated.

Altogether we enjoyed a superb day and went away inspired to adapt our gardens to fern growing as Mike has done so well.

Annual General Meeting, Holehird, South Cumbria – 6 October Peter Campion

The weather was once again superb, enabling North-West members to enjoy the National Collection of *Polystichum* and the flowering plants of Holehird Gardens.

Professor Mary Gibby gave us a fascinating talk on UK Biodiversity Action Plans, Red Lists and conservation 'on the ground'. In particular she illustrated her talk with examples of the problems of conservation using three of our rarer ferns, Killarney fern, *Trichomanes speciosum*, *Woodsia ilvensis* and the mountain lady fern, *Athyrium distentifolium* var. *flexile*. The first has so far defied reproduction in the laboratory but thrives in the Azores and also survives as the gametophyte generation in deep rock crevices in the UK and Europe, no doubt waiting for global warming to enable it to produce more of the sporophyte generation. *Woodsia ilvensis* seems to be surviving well after being re-introduced into the wild. It remains to be seen if it will reproduce naturally in the wild again on any scale. *Athyrium distentifolium* var. *flexile*, is a

form of *A. distentifolium* resulting from recessive genes and probably survives by being better adapted to its habitat – the spores ripen sooner, are on the lower pinnules and it has a low growing habit, so is less vulnerable to browsing than the larger *Athyrium distentifolium*. These contrasting examples gave us a glimpse of the challenges confronting those responsible for conservation and showed the need to apply different policies in each case. Most illuminating.

The AGM reappointed the secretary and appointed Frances Haigh as the new treasurer. This enabled us to thank Melville Thompson for all his work as treasurer over a good number of years. The prize for the best outdoor fern went to Alec Greening and to Melville for his indoor fern. Our thanks to Mary Gibby for judging the exhibits. The prize for the quiz was not awarded as Jim Adams made it more challenging than usual by leaving out the clue for one letter! Shrewdly, to avoid setting it again for 2008, Jim proposed a photographic competition, which should make an interesting display as well as hopefully encouraging skills in this area in the North-West.

Our President, Robert Sykes, gave us an illustrated account of the 2006 joint BPS and HFF visit to Germany. A bewildering 823 taxa were seen in nine gardens, two nurseries and two wild sites. Excellent pictures of numerous varieties of ferns, a number of interesting growers and enthusiasts in the party made this a very good talk. A great respect was created for the pteridological abilities and enthusiasm of those visited.

Our grateful thanks to the speakers and to those who provided refreshments. Altogether a good day.

BOTANICAL CORNWALL GROUP

Matt Stribley

There was again a full year of meetings throughout Cornwall organised by the Botanical Cornwall group (BCG), with an emphasis being placed on recording the flora in those areas less well covered by past recording activities. This report gives a brief overview of selected meetings.

Deerpark Wood, near Looe, South-East Cornwall – 9 May

The first meeting of the year attracted six members who explored and recorded in the extensive woodland, hedges and streams to the north-west of Looe (20/197603). The landscape of this area is gentle with many pleasant interesting wooded valleys with abundant ferns. The usual 'ferns of the area' recorded were *Asplenium adiantum-nigrum*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis*, *D. dilatata*, *D. filix-mas*, *Asplenium scolopendrium*, *Polypodium interjectum*, *Polystichum setiferum* and *Pteridium aquilinum*. In addition to the above the group was pleased to find *Dryopteris aemula* and *Oreopteris limbosperma*. Near a stream a young *Dryopteris* had characters of *D. carthusiana* but this was not confirmed.

Sennen Cove, near Land's End – 20 May

Sennen Cove (10/355262) is located at the western tip of Cornwall only a mile or so from Land's End. Here our party of eight explored the coastal habitats, cliffs and beaches, hoping to find *Euphorbia portlandica*, *Baldellia ranunculoides*, *Glaucium flavum* and *Stellaria pallida* but also keeping an eye out for any ferns. *Asplenium adiantum-nigrum*, *A. marinum*, *Dryopteris filix-mas*, *Pteridium aquilinum* and *Polypodium interjectum* were recorded, all of which are new tetrad records. *Osmunda regalis* was also found in a coastal flush and *Asplenium obovatum* subsp. *lanceolatum* around granite outcrops at 10/360269.

Loe Pool & Carminowe Creek – 21 July

Loe Pool (10/643242) is Cornwall's largest freshwater lagoon, only separated from the Atlantic Ocean by a shingle bar. The pool itself is some 1.7km long by 0.3km wide and

comprises The Loe and Carminowe Creek. The area is botanically interesting and the group of six set off to explore for species such as *Eleocharis acicularis*, *Elytrigia* × *obtusiuscula* and *Elatine hexandra*. During the morning plenty of ferns were seen, with ten species being recorded, including *Equisetum fluviatile* in the pool margins. In the afternoon the adjacent small wooded valley area near Chyvarloe (10/653239) was explored where *Dryopteris aemula* (10/6530 2394), *D. affinis* and *D. borreri* were recorded.

South of Plusha – 5 August

A group of ten met at Plusha (20/252802) on the edge of Bodmin Moor where open granite moorland dominates, interspersed with woodland, hedges and clear streams. This proved to be a fern-rich day with good populations of *Oreopteris limbosperma*, *Osmunda regalis*, *Dryopteris aemula*, *D. affinis* subsp. *affinis* and *D. borreri*. In some of the wooded areas there were good populations of *Polystichum setiferum*. There was an unsuccessful search for an old record of one of the rarer ferns in Cornwall, *P. aculeatum* in Upton Wood (20/247792). Other notable records for the day were two plants of *Dryopteris* × *complexa* nothosubsp. *complexa* and one plant of *D. cambrensis*.

Fowey & Polbrock – 17 September

During September we had a day of ferning accompanied by Ken Trewren. At Fowey (20/125516), an historic harbour situated on the south coast, there are good populations of *Polypodium cambricum*. In one of the sunken lanes on the edge of the village (20/125521) Ken had found a good selection of *Dryopteris affinis* agg. growing in the damp banks, including *D. affinis*, *D. borreri* and specimens of *D* × *complexa* nothosubsp. *complexa* and *D. cambrensis*.

The rest of the morning was spent exploring the mid-Cornwall moors. At Breney Common (20/056610) *Pilularia globulifera* was found in the edge of a small stream. In the willow carr *Dryopteris carthusiana* was common and after a period searching, *D.* × *deweveri* was found. Lunch was taken on Helman Tor (20/062615), where *Hymenophyllum tunbrigense* was found in the rocky crevices. Deep inside one of the crevices Ken pointed out a patch of *Trichomanes speciosum* gametophyte.

Following lunch we set off to explore the area around Polbrock Bridge (20/013695) on the River Camel. Here, *Cystopteris diaphana* was observed with numerous healthy plants visible all along the almost bare, sheer riverbank, as the river level was low. This proved to be a very good site for *Dryopteris*, and within a short time *D. affinis* subsp. *affinis* and subsp. *paleaceolobata*, *D. borreri and D. cambrensis* were found. Later, we returned to the mid-Cornwall moors to search for *Lycopodiella inundata* on Retire Common (20/003633). This is a known site but despite careful searching the plants were not found. It is thought that a recent change in the water table may have caused the loss, as the site appeared much wetter than previously. However, it is hoped that with the recent introduction of grazing to the Common, the species may reappear in areas opened up by the cattle hooves.

Carn Galver, near St Ives – 20 October

This was mainly a bryological field meeting, with mosses being of particular interest. This site (10/426365), known for filmy ferns, is located on the north coast of the granite moors to the west of St Ives and spectacular views of both the south and north coasts are to be had from the top. After clambering over the granite clitter, good populations of both *Hymenophyllum tunbrigense* (in deep crevices) and *H. wilsonii* (in more open conditions amongst mosses) were found on the north-eastern slope, with the populations being larger than previously recorded. Also found after a fair bit of searching was a single plant of *Dryopteris aemula*, but *D. affinis* and *D. borreri* were more common.

SCOTLAND

Frank McGavigan

Pease Dean, Berwickshire, Scottish Borders – 9 June

(*Participants*: Chris Bierley, Adrian Dyer, Frank McGavigan, Heather McHaffie, Richard Pankhurst, Liz Pilling, Alex Prendergast.)

The contrast between the manicured gardens of the caravan site where we parked our cars (36/793708) and the ancient woodland of Pease Dean was astonishing, particularly as initially we chose not to take the paths high up on either side of the glen but rather scrambled through the undergrowth along the bottom until further progress was barred by fallen trees across the stream. We were rewarded by masses of *Polystichum setiferum*, a relatively scarce fern in Scotland. One could be forgiven for mistaking it at first glance for a member of the *Dryopteris affinis* aggregate but it does not take long before the eye easily spots the differences, which is more than can be said for the members of the *D. affinis* agg. itself. On several occasions we studied plants trying to decide whether each was *D. affinis*, *D. borreri* or *D. cambrensis* but to no avail. None seemed to fit any of the separate species convincingly. I can hear certain members of the BPS saying, "Must try harder". By contrast we had no difficulties with *Asplenium scolopendrium*, *Athyrium filix-femina*, *Dryopteris dilatata*, *D. filix-mas*, *Equisetum arvense* and *Pteridium aquilinum*; we hesitated about which *Polypodium* we were looking at but soon decided it was *P. interjectum*.

Later we did a circuit of the upper paths, a delightful and easy walk that includes crossing a magnificent old stone bridge across the glen. Passing lots more *Polystichum setiferum* we also took note of a leaf gall on hazel caused by the mite *Phytopus avellanae*, and *Rosa sherardii* with white flowers rather than the usual deep pink. Then right at the end, Alex appeared with a frond of *Equisetum telmateia*, which Adrian's detailed notes for the area had told us was present but which we had not yet seen.

With only half the day gone, Adrian invited us to visit his garden on the other side of Edinburgh, but first a few of us detoured to Edrom Nursery, which stocks a small selection of choice ferns but also a magnificent array of unusual woodland plants that would make ideal fern companions. At Adrian's, Janet provided us with much appreciated tea and biscuits, and then we toured the garden, where Adrian has representatives of most of the fern flora of Scotland including *Woodsia alpina* and *W. ilvensis*, *Athyrium distentifolium* and its variety *flexile*, *Polystichum lonchitis*, *Thelypteris palustris*, *Cystopteris dickieana*, and of course members of the *Dryopteris affinis* agg. No, he is not sure which is which either. He also has several equisetums, which he only half-heartedly controls so that such as *E. telmateia* pop up everywhere. Surprisingly he has lost *E. arvense*, making him surely unique among British gardeners. Adrian's collection is not confined to native ferns, and I particularly noted *Dryopteris fragrans*, *D. goldiana*, *D. intermedia*, *D. wallichiana*, *Matteuccia struthiopteris*, *Onoclea sensibilis* and *Polystichum acrostichoides*. Pease Dean had been well worth the visit; this was an added and delightful bonus.

Aviemore Area, Invernessshire – 7-8 July

(*Participants*: Adrian Dyer, Roger Golding, Frank McGavigan, Chris Nicholson.)

Last minute cancellations and a poor weather forecast meant our numbers were fewer than expected – a pity given that we had a most interesting and informative weekend. We began just off the A939 south of Grantown-on-Spey, parking at 38 065232. Our principal aim was to find three species of clubmoss on the hillside close to the road where Adrian had brought students on field trips in the past. But first, beside a burn next to the road we spotted *Equisetum sylvaticum*. I defy even the most hardened horsetail hater not to admire this one. Almost opposite was a magnificent clump of the melancholy thistle (*Cirsium*

heterophyllum), not a fern of course but what a wonderful companion it would be for, say, *Athyrium filix-femina*, in the garden. Next came *Dryopteris dilatata* and what we agreed was *D. affinis*, but these were isolated plants compared with the almost tropical *Blechnum spicant* carpeting the birch woodland on the west side of the road. In comparison, the *Blechnum* on the heather moorland on the east side, which is managed for grouse (i.e. periodically burnt), although just as plentiful, was in a very poor state. The early growth had been blackened by late frosts and the new growth was poor and uneven, almost depauperate. Of the clubmosses we quickly spotted *Lycopodium clavatum* scrambling over a bare, rocky patch. A little higher Chris found *Diphasiastrum alpinum*, relatively common at high altitude in Scotland but seldom as accessible as here (38/0672 2312). Of *Huperzia selago* we found not a trace.

In the afternoon we headed for Cairn Gorm, or at least its car park (28/989061). Sheltering from the one rain storm we had over the weekend we had a chat with the mountain ranger, Nic Bullivant, who directed us first to the little garden of mountain plants at the foot of the funicular railway (though strangely some of the ferns were mislabelled), and then into Coire an t-Sneachda below Cairn Gorm itself (28/992039). Noting *Oreopteris limbosperma* and *Blechnum spicant* in passing, we soon found the *Huperzia* that had eluded us in the morning, as well as *Lycopodium annotinum* and *Diphasiastrum alpinum*, but we were taken by surprise by *Athyrium distentifolium* – lots of it in a very healthy state (28/9918 0394). There had been heavy snow as late as May with the last fall in June so it had been well protected from damaging spring frosts. Nearby were *Gymnocarpium dryopteris* and *Phegopteris connectilis* as well as *Trollius europaeus* (the globe flower and another garden-worthy plant), cow wheat, cloudberry, dwarf cornel, and various orchids and sedges. At the foot of a scree (28/9902 0366) Roger found several plants of *Dryopteris expansa*, which we convinced ourselves were not *D. dilatata* though the two at this altitude can appear very similar. A wild but fascinating place, well worth the little effort it takes to get there.

On Sunday, in beautiful weather, Adrian took us to the car park at Loch an Eilein (28/897086). A little walk back along the road and we had soon 'ticked off' *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis* (we agreed on this one), *D. dilatata*, *D. filix-mas*, *Gymnocarpium dryopteris*, *Oreopteris limbosperma*. *Asplenium ruta-muraria* (on a wall), and *Polypodium vulgare*, but the real purpose of our visit was to see the type locality of *Pteridium aquilinum* subsp. *pinetorum* (28/8955 0906), first identified (as a separate species) in 1983 by Chris Page (and also discovered almost simultaneously by Adrian Dyer at a site nearby). Subsp. *pinetorum* is clearly distinct from subsp. *aquilinum*, especially when you see them growing side by side as you can here. It is a smaller, and, dare I say it, more graceful plant with the stipe angled at 60° from the vertical at the lowest branching giving a swept-back appearance (subsp. *aquilinum* tends to grow upright with its fronds in tiers). The frond shape also differs, being almost equilaterally triangular in subsp. *pinetorum*, but in subsp. *aquilinum* elongated with the lowest pinnae pair frequently shorter than the next pair above. In subsp. *pinetorum* the pinnae of each frond unfurl almost synchronously whereas in subsp. *aquilinum* they expand successively, a feature particularly noticeable in the early summer. It is of course associated with pine woods and so far has only been recorded from a few places in the Scottish Highlands. Its exact relationship with *Pinus sylvestris* is clearly a research project in the making.

In the afternoon we moved south-west to Loch Insh and more woodland (28/841045). One of the most noticeable features of these Eastern Highland woods is the absence of ferns in many of them (so very different from the west) but we found *A. filix-femina*, *B. spicant*, *D. dilatata*, *D. filix-mas* and more *Pteridium aquilinum* subsp. *pinetorum* (at Adrian's 1983 site), as well as, of course, its commoner cousin. Adrian had wanted to show us a plant that he thought might be *Dryopteris expansa*. Roger felt it had more the appearance and characteristics of *D. carthusiana*. Expert verification later by Mary Gibby proved Roger

right although I have to confess it was the most unlikely looking *D. carthusiana* to me. Clearly I need to go on a *Dryopteris* course: I wonder if the BPS will organise one.

Meall Tionail, Beinn an Dothaidh, Bridge of Orchy, Argyll (27/343391) – 25 August

(*Participants*: Roger Golding, Yvonne Golding, Frank Katzer, Bridget Laue, Richard Lewis, Frank McGavigan, Andy MacGregor, Heather McHaffie, Paul Sharp.)

The purpose of this outing was to monitor a *Woodsia alpina* site visited by John Mitchell *et al.* in 1978 but probably not recorded since then. Our problem was that the site is across two rivers and up a steep hillside, easily reached in good weather, but not in the conditions we faced – rain and yet more rain. Scottish mountains in bad weather can be dangerous places and I was worried, especially when there were murmurings from some about their ability to cope. Should I call the whole day off, or split the party in two leaving half the group to wait in the rain while the other half pushed on? In the end we all went on, wading the rivers up to our knees, and slowly picking our way up to the site.

Or what I thought was the site, but of course I was wrong, there being no sign of *Woodsia alpina*. As always Frank Katzer came to the rescue and was soon scurrying across the hillside examining each outcrop of rock until he found one with evidence of basic seepage, in this case in the form of *Asplenium trichomanes*. He called the rest of us up and to add to his triumph the rain stopped, the sun shone, and we found lots of ferns. As well as the *A. trichomanes* there were plants of *A. viride*, *Blechnum spicant* (strange for a limey outcrop), *Cystopteris fragilis*, *Polystichum aculeatum*, *P. lonchitis*, and a little way off, *Cryptogramma crispa*. The clubmosses *Huperzia selago* and *Selaginella selaginoides* were also present. Flowering plants, as identified by Andy MacGregor, were represented by *Sedum rosea*, *Rubus saxatilis*, *Galium boreale*, *Angelica sylvestris*, *Geranium sylvaticum*, *Plantago maritime*, *Oxyria digyna*, *Silene acaulis*, *Solidago virgaurea*, and *Rhinanthus minor* – a veritable alpine garden. And the *Woodsia*? Well that was a little disappointing – four small clumps, clearly not thriving or spreading but no worse than as reported by John Mitchell in 1978. But we duly completed a record card, and Roger Golding took photographs, all of which will be copied to the local Vice-county Recorder as well as to Scottish Natural Heritage. So what's a wet sock or two when it comes to fern recording duties?

Kintyre, Argyll – 15-16 September

(*Participants*: Pat Batty, Wendy Byford, Frank Katzer, Frank McGavigan, Heather McHaffie, Christine & Livingston Russell, Ian Teesdale.)

An invitation to Kintyre from a group of local botanists, who had sought help from Heather on fern identification, was too good an opportunity to miss, as, although home to some fern rarities, this beautiful peninsula is too remote for many visitors. We began the weekend at the Russells' house in Peninver: hot coffee, home-made cake and dramatic views out to sea with seals in the near distance tempted us to stay put all day, but there was work to be done. First stop, a nearby roadside dyke (16/7572 2391), from where *Polypodium cambricum*, almost unknown in Scotland, had been recorded in the past. The plants we saw certainly looked like *P. cambricum*, but afterwards, using the Russells' microscope, Heather was able to show they were *P. interjectum*. Incorrectly recorded in the past? Or had we homed in on the wrong plants? This was the only disappointment of the weekend but the Russells promised to continue the search.

Next we spent some time in the wood that forms part of the Russells' extensive garden. Given mixed woodland in the west of Scotland it was no surprise to find *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris aemula*, members of the *Dryopteris affinis* agg.

(we positively identified *D. affinis* and *D. borreri*), *D. dilatata*, *D. filix-mas*, *Oreopteris limbosperma* and *Polypodium vulgare*, but there is a streak of limestone running through the garden and so we also found *Asplenium scolopendrium*, *Polystichum aculeatum*, and much to the delight of Christine, who had not realised it was there, *P. setiferum*. The cultivated part of the garden, which incidentally is spectacular and beautifully maintained, had several wild plants of *Asplenium adiantum-nigrum* and *A. trichomanes*, as well as introduced exotics such as *Adiantum pedatum*, *A. venustum*, *Blechnum chilense*, *Dicksonia antarctica* and *Woodwardia radicans*.

We then travelled slightly north to Ardnacross and the only known site in Scotland for *Asplenium obovatum* subsp. *lanceolatum* (better known as *A. billotii*) (16/76642554). We counted 141 clumps over a 2x10m area of dolerite dyke. Only 18 had been recorded in 1971 so clearly the colony is thriving. We also noted the similar *A. adiantum-nigrum*, and, nearer the sea, *A. marinum*.

After lunch we moved on to Saddell to another stretch of old mixed woodland (16/797318). Here we were rewarded with *Asplenium adiantum-nigrum*, *A. scolopendrium*, *A. trichomanes*, *Athyrium filix-femina*, *Blechnum spicant*, *Dryopteris affinis* agg., *D. dilatata*, *D. filix-mas*, both *D. aemula* and *D. expansa*, *Oreopteris limbosperma*, *Polypodium vulgare*, and *Pteridium aquilinum*. But the main reason for our visit was to find filmy ferns, and sure enough both *Hymenophyllum tunbrigense* and *H. wilsonii* were in great abundance, and as a bonus we learned from our hosts a mnemonic to distinguish them – '*tunbrigense* with teeth, *wilsonii* without'.

photo: H. McHaffie

Among the ferns in Saddell wood, Argyll
Frank McGavigan, Ian Teesdale, Christine Russell,
Pat Batty, Frank Katzer, Livingston Russell

With Sunday came heavy rain, but undaunted, we first sought in vain in Tangy Wood for *Dryopteris carthusiana*, and then went to Aros Moss (16/679228), where of course there was unexpectedly lots of *D. carthusiana*, and some fine specimens of *Osmunda regalis*, the original reason for our visit. On a roadside wall in Campbeltown (16/71092037) our hosts pointed out *Asplenium ceterach*, *A. ruta-muraria*, *A. trichomanes* subsp. *quadrivalens*, and *Polypodium interjectum*.

After again taking advantage of the Russells' hospitality to shelter from the rain and eat lunch (we repaid their generosity by infecting them with the fern bug), a few of us travelled to Claonaig in the north of the peninsula to the, until recently, only known site for *Dryopteris* × *sarvelae* (*D. carthusiana* × *D. expansa*) (16/8600 5535). I understand this hybrid is now being found elsewhere. Here in very acidic, old oak woodland it proliferates, though neither of its parents seems to be present. There were lots of small, young plants, indicating that spores are viable. Also present were *Oreopteris limbosperma* (the dominant species), *Blechnum spicant*, *Dryopteris aemula*, *D. dilatata*, *Pteridium aquilinum*, and epiphytic *Polypodium vulgare*. A beautiful spot with the persistent rain only adding to the drama of the roaring burn that flows through the wood.

Dollar Glen and Rumbling Bridge, Clackmannanshire – 13 October

(*Participants*: Adrian & Janet Dyer, Grant Fortune, Frank Katzer, Bridget Laue, Paul Sharp, Frank McGavigan, Chris Nicholson, Andrew Sanderson.)

With the mist swirling overhead and Castle Campbell emerging through the trees at the top, our visit to the dramatic ravine of Dollar Glen (26/963989) was like stepping into the pages of Scottish mythology. The steep flanks of the glen are covered with ferns revelling in the damp shade and creating such a beautiful scene that we were tempted to abandon formal recording in favour of just enjoying the overall spectacle. Certainly, on this our last outing of the year, no one had the inclination to decipher the intricacies of the *Dryopteris affinis* agg. It was a day for lumping *and* liking.

In the mixed woodland, we inevitably came across other *Dryopteris* (*D. filix-mas* and *D. dilatata*) as well as *Athyrium filix-femina* (now going over) and *Blechnum spicant*. These were growing in the accumulated acidic humus on the surface. Where the underlying rock was exposed, the fern flora changed to more calcicole species, notably *Polystichum aculeatum* (here in abundance) and *Asplenium scolopendrium* (some with very narrow fronds) with the occasional *A. trichomanes*. *Polypodium interjectum* was also present, although we could not quite reach a frond to be 100% certain. *Polypodium vulgare* was growing epiphytically on oak and sycamore (and also unusually on ash), and on a few trees was present all the way up the trunks, creating a tropical appearance. Some of these polypodies seemed large and vigorous with a good chance that they were the hybrid *P.* × *mantoniae*.

The walls of Castle Campbell carried a fine crop of *Asplenium trichomanes*, but also *A. adiantum-nigrum*, *A. ruta-muraria* and *Cystopteris fragilis*, as well as the odd *Polypodium* and *Athyrium*. Grant told us that the garden had once had a small fernery but this has disappeared, no doubt the victim of horticultural ignorance. Beyond the castle, where the hillside becomes more open, *Pteridium aquilinum* and *Oreopteris limbosperma* predominated, but both were past their summer best.

After a leisurely lunch we moved on to Rumbling Bridge (36/016995), so named because here the River Devon roars through a spectacularly deep and narrow gorge with dramatic sound effects. The path is laid out with platforms strategically sited to give the best views of the rushing water, but also coincidentally of the ferns. Again the exposed rock encourages *Polystichum aculeatum*, *Asplenium scolopendrium*, *A. trichomanes* and *Polypodium interjectum*. In the leaf litter above grew the more usual *Athyrium filix-femina*, *Dryopteris affinis* agg., *D. dilatata*, *D. filix-mas*, and in the more open areas *Pteridium aquilinum*, with *Polypodium vulgare* in the trees. But, as at Dollar Glen, a mere list of ferns cannot do justice to the magical beauty of this gorge. Both sites are easy of access with well-defined paths and frequent resting points from which to admire the rushing water and majestic trees, and of course tick off a few ferns.

Group of European Pteridologists (GEP) Excursion

Czech Republic – 15-19 July

Pat Acock

Nineteen pteridologists arrived from all over Europe during Sunday afternoon. We were staying in the hotel 'Vila Krenov' in the small hamlet of Krenov close to the Polish Border in the Krkonoše Mountains in the northern Czech Republic. The weather was very hot at 35°C but the vegetation was lush, hinting at regular rain. The family-run hotel was ideal for our needs and we were the only guests, which allowed us the freedom to make as much noise as we wanted in our discussions on matters ferny.

Monday saw us in Špindlerova, a ski resort above Špindleruv Mlýn. We only saw *Athyrium distentifolium*, *Dryopteris filix-mas*, *D. dilatata* and *Cystopteris fragilis* in the conifer forest at the top but were rewarded in addition with *Equisetum arvense*, *E. sylvaticum*, *Phegopteris connectilis*, *Blechnum spicant*, *Oreopteris limbosperma*, *Athyrium filix-femina* and *Gymnocarpium dryopteris* on the long walk back to the car park.

On Tuesday we went in a cable car up the highest mountain of Middle Europe outside the Alps, Sněžka. The party split in two. The hardy group went off to more distant places to look at *Isoetes* but were disappointed as a warden would not let them leave the trail and they only saw a few ferns. Unfortunately for the second group the first coffee stop was in Poland and the exchange rate was not in our favour with only kronas to spend! Early on, Andrew Leonard spotted a very large *Botrychium lunaria* and a little further along the trail the French party called us over to examine their *Diphasiastrum* find, which turned out to be *D. alpinum*. Another long walk, fortunately with many stopping places for tea, saw us back at the cars footsore but happy. In the evening after dinner, Wilfried Bennert treated us to a slide-show on his recent trips to the Philippines, which seemed magnificent for ferns but not for staying dry!

Serpentine rocks are often good sites for interesting aspleniums, so on our final day together it was decided to set off to explore 'on spec' the serpentine region of Poland, south of Sobótka, which proved elusive with roads cut off by barriers. When we did eventually all reach the woodland with the serpentine rocks, we found it very damp and shady and disappointingly we could not find a single *Asplenium*.

photo: A. Leonard

GEP 2007

Back: Ronnie Viane, Claude Jerome, Pascal Holveck, Martin Rickard, Manfred Horn, Christianne Baumann, Karsten Horn, Franco Passarello, Sylvain Speissner
Front: Andrew Leonard, Arnaud Bizot, Pat Acock, Wilfried & Carmen Bennert, Paul Ripley, Lien Van den heede, Daniella Ivanova

Although the number of ferns was small, the breathtaking beauty of the area and the good company, which allowed us to discuss our varied interests, made this another memorable and enjoyable excursion.

Driving home after the excursion, the British contingent returned to the lower ski slopes of Špindlerova and was able to recognise four diphasiastrums, namely *Diphasiastrum alpinum*, *D.* × *issleri*, *D. tristachyum* and *D. complanatum*.

If you are interested in joining the GEP annual excursion please contact Prof. Ronnie Viane, Research Group: Pteridology, Dept of Biology, Ghent University, K.L. Ledeganckstraat 35, B-9000 Ghent, Belgium.
E-mail: Ronnie.Viane@UGent.be;
Tel. & Fax: +32-9-2645057.

HORTICULTURAL SHOWS

SOUTHPORT FLOWER SHOW – 16-19 August — M. Hayward

The theme set for the show this year was 'Music'. Our token response to this was the presence of fiddleheads in our display! Vases of cut fern fronds and a display of fern photographs formed the background to the stand, with a demonstration of propagation methods to the fore. This year we displayed an increased number of young ferns in pots, which attracted a steady stream of visitors to the stand.

photo: R. Ennos

Southport Flower Show 200

Yvonne Golding, Michael Hayward, Harvey Shepherd (with Happiland Trophy), Ann Gill

Visitors frequently enquired about selecting suitable varieties of ferns for the garden and for next year we plan to produce a range of pamphlets on this topic, as well as one giving details of local branches of the BPS. The FSC *Key to Common Ferns* was again the most popular item of merchandise on sale.

The number of exhibitors in the competitive classes is slowly increasing and although the standard of exhibits was a little patchy, there were many excellent specimens on show, particularly a large pot of the small *Blechnum microphyllum* from Harvey Shepherd, who this year won the Happiland Trophy. The BPS Cup for the Individual Championship was again won by Brian Russ. The fern judge was Richard Godard-Key.

The prize-winners are listed below.

Class 8 Individual Championship: Four Hardy British Ferns (dissimilar), two Greenhouse Ferns (dissimilar) and two Foreign Ferns Hardy in Great Britain: 1st B. Russ. 2nd M. Hayward, 3rd I. Rawson (3 entries)

Class 9 Three Hardy British Ferns (distinct species, not varieties): 1st I. Rawson, 2nd H. Shepherd (2 entries)

Class 10 One Foreign Fern Hardy in Great Britain: 1st H. Shepherd, 2nd B. Russ, 3rd I. Rawson (4 entries)

Class 11 Three *Polypodium* (3 distinct varieties): (no entries)

Class 12 Three *Polystichum* (3 distinct varieties): 1st H. Shepherd (1 entry)

Class 13 Three *Athyrium* (3 distinct varieties): 1st M. Hayward (1 entry)

Class 14 Three *Asplenium* excluding *A. scolopendrium* (3 distinct varieties or species): 1st H. Shepherd (1 entry)

Class 15 One British Fern (any genus or variety): 1st H. Shepherd, 2nd O. Fairclough, 3rd I. Rawson (3 entries)

Class 16 One Greenhouse Fern: 1st J. Abbott, 2nd D. Abbott, 3rd D. Need (4 entries)

Class 17 Three *Asplenium scolopendrium* (3 distinct varieties): (no entries)

I would like to thank Ruth Berry, Roland Ennos, Ann Gill, Yvonne Golding, Rita Hardman, Trevor Piearce and Harvey Shepherd for manning the stand. All the helpers again enjoyed social evenings at my house in Blundellsands after the show.

The dates for next year's show are 21-24 August 2008. The theme for the show is 'Liverpool' and we are planning a new look for the BPS stand, complete with our own 'Liver Bird', so do try to come and see what surprises we will have on display. Or why not join us on the stand and get your entrance to the show free! I can arrange stop-overs for anyone travelling a distance. You also get a complimentary ticket to the show if you exhibit in the competitive classes. If you are interested in showing ferns at Southport either contact M. Hayward (6 Far Moss Road, Blundellsands, Liverpool L23 8TQ; mhaywardL23@blueyonder.co.uk) or obtain details of the schedule direct from the organisers at www.southportflowershow.co.uk

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THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. You are welcome to visit the AFS website: amerfernsoc.org. Regular members receive *Fiddlehead Forum* five times a year, a newsletter published for those who are interested in growing ferns, hunting for them and expanding their knowledge of ferns. Journal members also receive the scientific quarterly *American Fern Journal*. Membership costs $19 and $32 per annum respectively for members residing outside USA, Canada or Mexico, including postage for airmail-assisted delivery. For particulars please write to Dr George Yatskievych, Missouri Botanical Garden, P.O. Box 299, St Louis, Missouri 63166-0299, USA (george.yatskievych@mobot.org). Online credit card payment is now available for the AFS via the AFS website.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. To take advantage of this, prospective members residing in Great Britain should contact Mr M.G. Taylor, Westlea, Kyleakin, Isle of Skye IV41 8PH (Membership@eBPS.org.uk).

SECRETARIAL NOTES

Please note: *names and contact details of all officers can be found on the inside of the front cover of this* **Bulletin.**

ANNUAL GENERAL MEETING 2008 – The 105th AGM will take place on Saturday 5th April 2008 at The Natural History Museum, London at 2p.m.

SUBSCRIPTIONS 2008 – Members are reminded that subscriptions were due on 1st January 2008 and should be paid to the Membership Secretary. Cheques should be made payable to 'The British Pteridological Society'. Current rates are given inside the front cover of this issue. Payment can be made by **Credit Card** – see renewal form. **Standing Order** forms are printed on the reverse of renewal forms and are also available from the Membership Secretary and the BPS website (www.eBPS.org.uk). Standing Orders may be paid on 1st January or 1st February. In either case, membership is deemed to be from 1st January to 31st December.

Members are reminded that according to Clause 11 of the Constitution "Any member failing to pay their subscription within six calendar months of its becoming due shall be liable to have their name removed from the List of Members of this Society"! Defaulting members who do not amend their Standing Orders with their bank and are still paying at the old rate shall be notified that they will not receive the Fern Gazette until such time as their Standing Orders are updated. Members still paying even earlier rates shall be notified that their name will be removed from the Membership List until such times as Standing Orders are updated or cancelled. Any monies received from old Standing Orders will be treated as a donation.

GIFT AID – Since 2003 the BPS has been a registered charity. This enables us to claim back from the Inland Revenue 28p for every pound paid in the annual subscription for each member who authorises us to do so. Since 2003, increasing numbers of members have authorised us to claim Gift Aid on their behalf, and last year (2007) we were able to claim for 205 members, which brought in £1,131. While this is obviously an extremely valuable addition to the Society's annual income, it could be considerably more. There are probably a further 200 members on whose subscriptions the Society could claim Gift Aid if these members authorised it and this could lead to perhaps another £1,000 per annum. All that is required is a minimal amount of form filling (about one minute) and a second class stamp. **Even better, the form has only to be filled in once.** The forms are retained by the Gift Aid Secretary and the same ones used year after year to make the claim.

The small number of provisos is set out below:

1. Gift Aid is available only to members who reside in the UK.
2. Members on whose subscription Gift Aid is claimed must be paying income tax or capital gains tax at least equal to the amount claimed.
3. Members whose subscriptions are allowed as an expense in connection with their employment may not claim Gift Aid.

If the Inland Revenue allows us to claim relief on your membership subscription please authorise us to do so. It's the equivalent of a yearly £5 donation to the Society.

DIRECT DEBIT – The Society does not offer a Direct Debit facility for subscriptions. The reasons are two-fold. Expensive software is required to create a direct debit tape to send to the bank and is too expensive for a small Society like the BPS. With Standing Orders the bank does all the administration, whereas with Direct Debits a considerable additional workload would fall on the Society, in particular the Treasurer, and it is necessary to bear in mind that all officers offer their time and services on a voluntary basis.

NOTIFYING CHANGES OF ADDRESS – Please inform the Membership Secretary of changes of address and telephone number. He will be responsible for notifying any other officers and appointees who need to know.

E-MAIL ADDRESSES – These are now published in the Membership List, as agreed, "for members who have a relatively stable e-mail address and who keep up-to-date with their messages". A supplementary list and amendments are published in the *Bulletin*. Members who wish to have their e-mail address added, changed or removed are requested to inform the Membership Secretary BY E-MAIL: Membership@eBPS.org.uk.

PUBLICATIONS BY AIRMAIL – Our journals can be sent by airmail to overseas members, provided that they advise the Membership Secretary and pay an additional subscription to cover airmail postage. See inside front cover for rates.

CODES OF SAFETY, CONDUCT AND DECLARATION FORM – All members attending Society field meetings should be aware of the Society's *Safety Code* (see 2000 *Bulletin* 5(5): 275), as well as the *Code of Conduct for the Conservation and Enjoyment of Wild Plants* (see 1999 *Bulletin* 5(4): 199), and are required to sign a Declaration form. Copies of these documents can be obtained from the Meetings Secretary or BPS website.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would have wanted this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Applications will normally be dealt with once a year and should be submitted by 1st November. Anyone wishing to apply for this funding should contact the General Secretary for further information.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Applications will normally be dealt with once a year and should be submitted by 1st November. Anyone wishing to apply for this funding should contact the General Secretary for further information.

THE J.W. DYCE AWARD – This award was set up to honour the memory of Jimmy Dyce who was a member from 1935 until his death in 1996. During this time he held all the key committee posts, virtually single-handedly saved the Society from extinction after the war, and contributed in so many other ways to shape the Society as it is today. The first award of £100 together with a certificate will be made at the AGM 2008 to the author of the best paper, article, book or other substantial piece of work published during 2007 in any of the three BPS journals, on the BPS website, or as a special publication. Winning entries, other than books, will be placed on the website for all to read. The award is open to everyone, whether professional or amateur, pteridologist, horticulturalist or fern enthusiast.

TREE-FERN SPECIAL INTEREST GROUP – For further information, please either send a stamped addressed envelope to the organiser, Alastair Wardlaw, 92 Drymen Road, Bearsden, Glasgow G61 2SY, or contact him by e-mail: Tree-Ferns@eBPS.org.uk. Alastair, having been Convenor since 1997, has indicated that he would like to stand down at AGM 2009. Therefore if the Tree-Fern Group is to be kept going beyond that date, it would be necessary to have a replacement. Please contact him for particulars of what is involved.

MEMBERS' INFORMATION SERVICE – Members often require information and advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. Queries from members on any aspects of the biology, identification or cultivation of ferns should be sent, with three first class stamps, to the Horticultural Information Adviser.

READING CIRCLE – The Society operates a reading circle for the *American Fern Journal*, a quarterly publication containing much information for those seriously interested in ferns. The

Fiddlehead Forum, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals contact the Horticultural Information Adviser.

FOREIGN FERN SOCIETY JOURNALS HELD BY THE SOCIETY – The Society exchanges journals with a number of other fern societies in the world. We have a collection of journals/newsletters from societies in the United States (2), Australia (3), New Zealand, India and the Netherlands. If members would like to browse these, they are welcome to get in touch with the Back Numbers Organiser for a list of our holdings. The journals can then be borrowed for just the cost of postage both ways.

BACK NUMBERS OF JOURNALS – Our Back Numbers are always a good source of Pteridological information. They contain articles written by an array of authors on interesting fern subjects. You can have a sample pack of six journals for £6. A full list of journal parts stocked is available from Pat Acock.

BPS WEBSITE – www.eBPS.org.uk (hosted by The Natural History Museum.) In today's internet-oriented world, it is increasingly important for the Society to see its website as a major means of communication. The website provides information for the membership, but it is also, and perhaps more importantly, a 'shop-window' to present the Society and pteridology to the wider world. Our aim is to make our website the premier source on the internet of information about pteridophytes and pteridology. Despite a number of serious problems outside our control, there have been a number of further significant enhancements to the website this year and the 'look and feel' and navigation of the whole site have been revised. There is an expanded Website Group to support the website, which helps to identify requirements, to support the work necessary to meet those requirements and to look at the future strategy. Members with views on what the website should provide and with offers to help with content should contact the Website Editor, Anthony Pigott. In particular, we would appreciate suggestions for wild sites, gardens and nurseries for 'Where to See Ferns'; contributions should be sent to Frank McGavigan (frank@mcgavigan2.demon.co.uk), who is assembling this information.

BPS E-MAIL LIST – Members are reminded that there is an e-mail group or 'list' for BPS members only. Its purpose is for discussion of Society matters of common interest and for communication of information; it is not intended as a list to discuss the botany or growing of ferns, for which another list such as UK-FERNS or FERNS would be more appropriate (see the BPS website under 'Links'). Send a blank e-mail to: BPS-subscribe@yahoogroups.com to subscribe. Unless your real name is obvious from your e-mail address, please send an e-mail at the same time to Webmaster@eBPS.org.uk in order to identify yourself as a BPS member. Members are encouraged to join as the potential benefits are greater with fuller participation. Contact the BPS Website Editor for further information.

BRITISH WILDLIFE – Concessionary individual subscriptions to *British Wildlife* magazine are available to BPS members: www.britishwildlife.com.

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS, enabling a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services. Further information is available from the General Secretary.

PAYMENT OF EXPENSES – Documents setting out the *Rules of Conduct for the Treasurer* (BPS/T/1), the *Rules for Seeking Re-imbursement of Personal Travelling and Administrative Expenses* by officers and members acting on behalf of the Society (BPS T 2), and the *Authorities for Payment* (BPS T 3) can be obtained from the Treasurer on request.

COPYRIGHT – All contributors to the BPS journals and website are required to sign an agreement assigning ownership of copyright of the article, photograph etc. to the BPS. This has the aim of safeguarding the contributors' work from unlawful copying and use. It does not stop contributors from using their own work elsewhere provided that they acknowledge the original source of publication.

MERCHANDISE – Do you have a BPS sweatshirt, polo shirt or fleece? These are all dark green with a small embroidered BPS logo in yellow. Other items, such as BPS ties, metal badges, ferny greetings cards, bookmarks, pens and mugs, are also for sale. Can't find your order form? Contact the Merchandise Organisers or look on the website for details. The Organisers also welcome suggestions for new stock.

BOOKSALES – It has now become more difficult to find second-hand fern books at reasonable prices so if you are thinking of selling any of your books please consider first offering them to the Society. Frank would also be pleased to receive any donated or bequeathed books that could then be offered to members at affordable prices. Contact him by e-mail if possible: Booksales@eBPS.org.uk.

DESTINATION OF PTERIDOPHYTE RECORDS – Members are reminded that records of ferns, horsetails, clubmosses and quillworts in the wild should be sent to the appropriate Botanical Society of the British Isles (BSBI) Vice-county recorders, whose addresses are available from the BSBI website or BSBI yearbook, which is available to BSBI members. For those without access to the Internet or yearbook, records may be sent to the BPS Recorder, Fred Rumsey, who will forward them to the BSBI. These records are stored centrally at the Biological Records Centre, and can be accessed by the BPS.

SOUTHPORT FLOWER SHOW – Why not spend a few hours or a day helping man the Society's stand? You do not need to be an expert on ferns or fern growing, just prepared to spend a few hours or a day with us. Expenses are available, as well as free entry to the Show. Details are available from Michael Hayward, 6 Far Moss Road, Blundellsands, Liverpool L23 8TQ. mhaywardL23@blueyonder.co.uk.

BPS FIRST MINUTE BOOK – This historical document containing the Committee Minutes from the inception of the Society in 1891 to 1983 is available in full colour on a CD ROM at £10 per copy, including postage. Place your order with Pat Acock.

NURSERY ADVERTISEMENTS – Members with nurseries that offer ferns are reminded that they may place an advertisement in the *Bulletin*, *Pteridologist* and on the website, free of charge, in return for the inclusion of a note about the Society in their catalogues. A suitable form of words is available from the Secretary. The Website Editor can include an image if required. If members wish their nursery to be included, please contact the General Secretary.

AMERICAN FERN SOCIETY – The AFS has had a reciprocal payment arrangement with the BPS for many years through their respective Membership Secretaries. See AFS advert on p. 498.

NEW POST – PUBLICITY AND MARKETING Officer – The Society is considering creating a new post of Publicity and Marketing Officer. If you have these skills and would be prepared to help us draw up a job description or indeed if you would like to volunteer for this post, then please contact the General Secretary.

NEW POST – EDUCATION OFFICER – The Society already offers educational opportunities for its members. We would like someone to co-ordinate and expand upon these activities for the general public as well as for our members. We anticipate that any volunteer for this post would have some experience in adult education. Please contact the General Secretary if you are interested in helping to establish this post.

NEW – CULTIVAR REGISTRATION SUB-COMMITTEE – Following the successful meeting at Wisley in November 2007, this new sub-committee has been set up. The intention is to apply for the Society to be registered as an International Cultivar Registration Authority. It plans to start with cultivars of *Polypodium*. The existing FERN VARIETIES NOMENCLATURE SUB-COMMITTEE will continue to be available for naming new cultivars. The contact is Robert Sykes.

ANNUAL GENERAL MEETING 2007

MINUTES of the 104th Annual General Meeting of the British Pteridological Society held on Saturday 4th March 2007 at the Royal Botanic Garden Edinburgh at 14.00 hrs.

[*Preamble*. These minutes were prepared by Graham Ackers using, for most of the Officers' and Committee Appointees' Reports, written reports supplied by the post holders. These minutes have been reviewed by Adrian Dyer, Robert Sykes, Yvonne Golding and Alison Paul, and their approval will be sought at the next Annual General Meeting on 5th April 2008. Notes, not being part of the minutes, are enclosed in square brackets as is this one.]

IN THE CHAIR: The President, Dr Adrian Dyer.

PRESENT: Graham Ackers, Pat Acock, Tony Braithwaite, Rob Cooke, Jonathan Crowe, Adrian Dyer, Grant Fortune, Mary Gibby, Tim Godfrey, Roger Golding, Yvonne Golding, Alec Greening, Michael Hayward, Jennifer Ide, Frank Katzer, Howard Matthews, Bridget Laue, Richard Lewis, Frank McGavigan, Heather McHaffie, Steve Munyard, Chris Nicholson, Alison Paul, Mike Porter, Tim Pyner, Martin Rickard, Paul Sharp, Harvey Shepherd, Bryan Smith, Gill Smith, Alex Storie, Matt Stribley, Robert Sykes, Mike Taylor, Ken Trewren, Alastair Wardlaw, Maurice Wilkins.

Item 1 – APOLOGIES FOR ABSENCE: Matt Busby, John Edgington, Peter Freshwater, Andy MacGregor, James Merryweather, Joy Neal, Anthony Pigott, Paul Ripley.

Item 2 – APPROVAL OF THE MINUTES: Minutes of the 103rd Annual General Meeting of the British Pteridological Society held on Saturday 25th March 2006 and published in the 2006 *Bulletin* (Vol. 6, No. 5) were approved and signed by the Chairman.

Item 3 – MATTERS ARISING: There were none.

Item 4 – OFFICERS' REPORTS

Item 4a – REPORT OF THE GENERAL SECRETARY (Yvonne Golding): Prior to the AGM 2006 the Committee recognised that the duties of the Secretary had increased as the Society's activities expanded. As a result, following the retirement of Jennifer Ide as Secretary, it was agreed to split the post: Graham Ackers took on the role of Committee Secretary, which involves servicing the Committee meetings and the AGM, and Yvonne Golding took on the role of General Secretary, which deals with all other duties, including external matters. I am pleased to report that this has worked well.

There have been quite a few changes on the committee during 2006. We now have a new treasurer (Gill Smith), Membership Secretary (Mike Taylor), Chairman of Publications Sub Committee (Martin Rickard), Plant Exchange Organiser (Jonathan Crowe) and Booksales Organiser (Frank Katzer). We have created some new posts: a Data Integrity Officer (Michael Hayward) to reflect our growing dependence on computer technology and a Project Officer (Anthony Pigott) to mobilise our membership to increase and pool our knowledge about ferns.

The Society has a very busy programme at the regional level and we note that four out of our six regional group leaders are retiring: Barry Wright has run the Leeds and District group (now renamed The Yorkshire Fern Group) for ten years; Barrie Stevenson has managed the East Anglia Group for ten years; Ian Bennallick has run the Cornish group for four years and Robert Sykes the North-West Group for two years. We thank them for their service and wish their successors – Bruce Brown, Tim Pyner, Matt Stribley and Peter Campion – the best of luck in the future.

Finally, we note that James Merryweather, editor of *Pteridologist*, wishes to retire. During his two periods of office James will have edited ten issues with the publication of the 2007 edition. He has completely re-vamped the format, taking the *Pteridologist* into the world of colour. We know he will be a hard act to follow but we urgently need a successor who will be given all necessary support.

The Committee met in August and October 2006 and January 2007. One of the first things we did was to define the terms of appointment for committee positions. It was agreed that Executive Officers and Committee Appointments should serve five years initially but this could be renewable. We felt this was a less daunting prospect for potential newcomers considering taking up these positions. The term of office for the President remains unchanged at three years.

We looked again at the role of Vice-Presidents, concluding that this should be a working role, not automatically awarded for long service or having been a President. We can have up to six Vice-Presidents at any one time, each serving a period of six years, which is now renewable.

During 2006 the committee decided to award three pteridologists honorary membership, which they have all gratefully accepted. These are John Mickel, Chris Page and Alan Smith. You can read their citations in this issue of the *Bulletin*.

Last year we awarded a grant from the Centenary Fund to Ken Trewren to investigate fern hybrids in Ireland. A short account of his work appeared in the 2006 *Bulletin*.

You will also have read in the 2006 *Bulletin* that the committee has instigated the J.W. Dyce Award in memory of Jimmy Dyce. This will take the form of an annual cash prize (the first to be awarded for 2007) for the best piece of published work in any of the Society's publications or on the website.

Last year saw the realisation of the much-awaited BPS Special Publication No. 9 on Fern Books by Nigel Hall and Martin Rickard.

An important issue that the committee had to address was the use of the term 'fern allies'. In the light of recent developments in pteridology we took the decision not to use this term but instead to refer to 'lycophytes' (which are the clubmosses and quillworts) and 'ferns' (which include ferns and horsetails). The remit of the Society, however, remains unchanged, as will our name, and our focus will continue to embrace both groups. It will take a long time for this new nomenclature to be generally used, so if in doubt refer to ferns, horsetails, clubmosses and quillworts, which is unambiguous and correct, if a bit long-winded!

During the past year Graham Ackers and Jennifer Ide have been incorporating the BPS herbarium into the RHS herbarium at Wisley. Jennifer Ide has also been working on an application for a possible grant to develop the BPS archive and is making efforts to find it a permanent home. Frank McGavigan has been re-invigorating the recording of ferns through taking the initiative in Scotland. Michael Hayward has been surveying the Jones' Nature Prints with a view to their eventual publication. The committee are deliberating as to what form this publication should take and what should happen to the original prints. Michael also successfully co-ordinated our BPS stand at the Southport Flower Show, continuing our representation there that was instigated by Matt Busby.

At this point it is my sad duty to bring to your notice the passing, in the last year, of seven members of our Society. Doreen Holly of Oxford joined in 1979 and was a regular at BPS meetings for many years. She was a gardener, growing many fine ferns and a keen rambler who cared deeply about the environment. Rosemary Stevenson of Suffolk was a family member for about six years though she had been associated with the Society for longer than that by supporting her husband Barrie during his ten years as organiser of the East Anglia Group. Other members include Dr R.A. Finch of Cambridge who joined the Society in 1968, Dr Anthony Griffin of Cornwall who joined in 2004, Mr Malcolm Heywood of East Yorkshire who joined in 2002, Mr Graham Thomsit of London, a member since 1980 and Mr Bryan Williams of Northants, since 1996. The Society sends its condolences to all their families.

In this coming year some of our time will be taken with the drawing up of a new constitution to reflect the changes we have made in the running of the Society and also to bring our Society in line with new Charity Law. This new constitution will be presented at our AGM in 2008. Our registration as a charity, which involved a lot of work during the presidency of Alastair Wardlaw, has been a very positive and advantageous move for the

Society. However, we must not forget that as a charity we have obligations not just to our members but also to the general public, so we must continue to be outward looking and come up with new and interesting ways of promoting ferns to everyone.

In conclusion, we are saying goodbye (or hopefully *au revoir*) to our President, Adrian Dyer, and welcoming the new one, Robert Sykes. Adrian has worked extremely hard on our behalf over the last three years, putting in place his vision for the future of the Society. His three-pronged approach was much more wide-ranging than simply Education, Education, Education but rather, Publications, Meetings and Projects with plenty of Education thrown in for good measure. In the near future we will be holding a planning meeting to build on Adrian's legacy and set out some objectives to take the Society forward into the 21st century.

Following this report, Jennifer Ide passed on Barrie Stevenson's gratitude for his wife Rosemary's remembrance in the *Bulletin*.

Acceptance of the report was proposed by Mike Porter, seconded by Grant Fortune, and approved by the meeting.

Item 4b – REPORT OF THE TREASURER (Gill Smith): The Treasurer distributed a draft set of the 2006 accounts, commenting that the layout was slightly different to the previous year, but the finances were essentially similar. Catching up with the backlog of *Fern Gazette* issues had resulted in an expenditure increase in this item. She pointed out that only the Centenary and Greenfield Funds were marked as restricted (ring fenced) at the moment but a case could be made for restricting other areas e.g. Publications. She also pointed out that the recent Chancellor's budget would mean a disappointing reduction in Inland Revenue Gift Aid income in 2008. Grant Fortune queried the increase in postage; this resulted partly from substantial increases in overseas postal charges. The Treasurer brought to the attention of all members at the AGM that there may be difficulties this year in getting the accounts audited, as Nick Hards had been seriously ill and there was no other examiner appointed. She asked for a volunteer to help out in this role as a second examiner when the elections took place later in the day. [Note that the final accounts for 2006 appear elsewhere in this *Bulletin*]. Acceptance of the report was proposed by Mike Taylor, seconded by Michael Hayward, and approved by the meeting.

Item 4c – REPORT OF THE MEMBERSHIP SECRETARY (Mike Taylor): Membership numbers suffered a decline in 2006, the overall total dropping from an impressive 793 in 2005, to a disappointing 746. This decline appears to have affected us across the board with a fall of 40 Ordinary and Family members and a drop of six Subscribers (Universities and Libraries). On the face of it a drop of six Subscriber members does not sound serious but the situation is in fact worse than it appears since, at the time of writing this report, a further 12 Subscribers had not paid for 2006. It should be mentioned at this point that, as regards deadlines for payment of fees, we tend to give extra latitude to Subscribers since many are based in comparatively remote areas of the world and many are in contact with us solely through agents. Nevertheless, if after a further reminder at the start of this year, there is no response their membership will have to be cancelled. This could mean a loss of up to 18 Subscribers out of 92 in the space of one year – which is worrying.

Looking at the general situation from a slightly different angle, we see that there were 64 new members in 2006 (as opposed to 86 in 2005) and that in 2006 83 members resigned or lapsed, compared with 67 in 2005. This can be summed up as fewer new members plus a greater than normal loss of established members.

Can we pinpoint any reasons for this? Resigning members sometimes give a reason for withdrawing their support, usually along the lines of "old age and decrepitude" or "other financial commitments" but the sole critical comment made in 2006 was that the journals did not provide enough information on cultivation. None of the Subscribers who failed to pay gave any indication of why. Could it be the apparent lateness of the *Fern Gazettes*? I use the term 'apparent' because we delivered the standard number of pages for Volume 17 of this journal within the required time-span (by the end of 2006), although the delivery was somewhat erratic!

Could it be that the decline in membership, which, anecdotally, has hit most small societies over the last few years has at last started to affect us as well? Could it be that we simply don't provide what the fern-loving members of the public require? Suggestions are welcome!

A reduction in the number of members in a society inevitably leads to a drop in the amount of Gift Aid received and this indeed has occurred. However, the fall has not been as great as might be expected. In 2005, 207 members enabled us to reclaim £1,129.52 in Gift Aid, in 2006 the equivalent figures were 206 members and £1,118.88 – a very worthwhile sum. In the four years for which we have been able to claim Gift Aid we have received just short of £4,000.

Finally, I would like to thank my predecessor Mike Porter for all the help he has given me in my first three months in office.

Following the report, a discussion took place on possible reasons for the drop in membership and ways to avoid further drops. Points put forward were:

- There may be a decline in the interest of institutions
- The idea of electronic subscriptions could be explored
- On-line publication policies could be reviewed
- There may be insufficient coverage for gardeners in the *Pteridologist*; competent gardeners reluctant to put pen to paper could be interviewed as an alternative to their producing an article
- The Society should extend its presence at garden shows
- Advertisements could be placed in magazines such as *BBC Gardeners' World* or (more locally) the *Suffolk Gardener*
- The *Pteridologist* could run a series of articles on growing different types of ferns
- There could be a Q&A feature in the *Pteridologist*
- One of the aims of re-formatting the *Pteridologist* was potentially to enable sales outside the Society – could this idea be pursued?
- Change the name of the Society to the more accessible 'British Fern Society'.

[These points will be considered by the Committee.]

Item 4d – REPORT OF THE MEETINGS SECRETARY (Pat Acock): The weather was superb and I had the very good fortune to attend nearly all the meetings. Our leaders did us proud once again. Someone on the meetings' sub-committee rings a candidate from out of the blue and they just seem to make it happen. We are so very fortunate to have people not only to serve on the sub-committee but also to find people who are willing to throw themselves into the preparation with such gusto.

All the meetings were superb and I must record on your behalf our grateful thanks to all our leaders and organisers. Thanks go to Barrie Stevenson, Graham Ackers, Barry Wright, Mike Hayward, Matt Stribley and Paul Ripley and all those who helped them. I must mention especially our grateful thanks to Dr Berndt Peters who was one of those people who received an e-mail from me out of the blue and said he would lead a meeting. He produced a meeting of ten days in Germany that was as towering in its organisation as it was intricate in its attention to detail. Also our very grateful thanks must go to Edmond Grangaud who not only had to put up with Paul Ripley and me in 2006 but spent another three days with us this year as well as coming out with us every day in the field when the main group arrived in his tropical paradise. Such wonderful generous people and we should be so grateful.

Our Autumn Indoor Meeting was disappointingly attended although of the 28 attendees we did have one member who travelled from Ireland, two from Wales and three from Scotland. The speakers and organiser really did deserve better than that especially from those who live so close to the capital. I am disappointed for them but also for the people who missed such an informative event that cannot be repeated in the near future as we will want to do other things.

Following the report, Robert Sykes thanked Pat Acock for all his work, and this was endorsed by Adrian Dyer.

Item 4e – REPORT OF THE CONSERVATION OFFICERS (Fred Rumsey & Heather McHaffie): No report given.

Item 4f – REPORT OF THE FERN GAZETTE EDITOR (Mary Gibby): After apologising for the recent publication delays, Mary announced that there was now sufficient copy for the next two issues, thus further delays were unlikely this year. It was felt to be a good idea to publish review articles, and more would be sought. Andrew Leonard continued to help with the editing, and was also producing an index using Mary's mark-ups.

Martin Rickard thanked Mary and Andrew for their work.

Item 4g – REPORT OF THE BULLETIN EDITOR (Alison Paul): The 2006 *Bulletin* was distributed two weeks before the AGM. On account of the number of meetings being reported, including two large overseas ones, the issue was once again large and had necessitated a considerable amount of micro-formatting.

Graham Ackers queried whether there could be more and larger photographs, and whether they could be printed in colour. This was discussed, and the following points emerged:

- The inclusion of colour photographs might entail formatting difficulties for the editor
- Photographs in the Bulletin used to be fewer and larger
- It was important to strike the right subject balance between people and ferns
- A portfolio of colour photographs could be included on the BPS website
- A quotation for the inclusion of colour photographs should be obtained.

[These points will be discussed by the Committee.]

Item 4h – REPORT ON THE PTERIDOLOGIST (presented by Martin Rickard): Our editor James Merryweather is standing down following the next issue. Potentially this is a problem, and members were urged to contact Martin if they felt they could help with any aspect of the editing. It was noted that, for various unavoidable reasons, last year's issue was late, and should have appeared in May as had been customary.

Item 4i – REPORT OF THE WEBSITE EDITOR (Anthony Pigott, read by Graham Ackers in his absence):

- Routine updates have gone ahead in a timely manner.
- A number of significant enhancements have been made this year, e.g. Fern Crib, full up to date *Fern Gazette* contents/abstracts, fern nursery listings.
- Photographs – permission has been obtained from a number of non-BPS photographers.
- We still need more contributions, especially photographs and material from other officers editors.
- We have had serious problems with the hosting at the NHM, only very recently resolved, resulting in a period of over two months without being able to update the website. This has caused significant delays to our plans for the first half of the year.
- New items that are in the backlog now being cleared include completely revised BPS Society pages (to be co-ordinated with the *Bulletin* editor), a 'Recording' section, 'Where to see Ferns in the Wild', an 'Editor's Blog' and special publication 'flyer'.
- We will shortly announce the date of a website 're-launch' later this year, to mark ten years of the website. By this time, all the website will follow the revised style and new structure along with a new navigation menu that will allow direct access to all pages. We will mark the re-launch with publicity both through the usual Society channels and through a range of external and sometimes novel routes on the internet. We must try to take advantage of all appropriate modern methods of digital communication. I like to think of the Society with one foot planted in the nineteenth century and the other firmly in the twenty-first!

Item 4j – REPORT ON SPECIAL PUBLICATIONS (presented by Martin Rickard): *Polystichum Cultivars* had sold around 200 copies, and the more recently published *Fern Books* around 100. Any ideas for further Special Publications should be forwarded to Martin. The series editor, Barry Thomas, was intending to stand down.

Item 5 – COMMITTEE APPOINTEES' REPORTS

Item 5a – REPORT OF THE PROJECT OFFICER (Anthony Pigott, read by Graham Ackers in his absence): The basic principles of how the Project Officer will operate have been discussed and agreed by the committee. We hope to have regular reviews to agree the main project areas to focus on, aligning these with the current priorities of the Society.

- Funding is important to many potential projects and we will be looking at how to make best use of currently available resources and at ways to increase the amounts available.
- A New 'Projects' section on the website is imminent.
- 'Quick Win': Fern Crib to be published on website – this is now complete.
- 'Quick Win': 'Affinis Watch' re-invigorated. There's been a lot of *affinis* related activity recently. It's a sometimes sensitive area with strong personalities involved and often opposing views on the taxonomy (both inside and outside the pteridological community). New website material is being prepared which will serve the original objectives of providing up-to-date information and encouraging recording.
- 'Quick Win': BSBI data exchange. Much good work has been done independently in Scotland; I expect to be able to use this to help produce a general procedure with support to make it 'routine'. I expect to meet with BSBI representatives shortly to confirm this.
- Electronic Publication: There are many, sometimes opposing views on what is appropriate to publish electronically. We are discussing the issues within the Publications Sub-committee with a view to establishing what we can all agree on with the intention of then starting an implementation project.
- Revitalised recording and data transfer: This follows from the data transfer and other recording initiatives already underway. I am working on a plan to co-ordinate this.
- Generally, some project areas may sometimes proceed with little direct involvement from the Project Officer. I don't see this as a problem! The important thing is that our objectives are achieved.

Item 5b – REPORT OF THE SPORE EXCHANGE ORGANISERS (Barry & Anne Wright, read by Graham Ackers in their absence): The exchange continues to be a popular service offered to members. The new procedures for the 2006 spore exchange were implemented. The spore list was only sent out to those requesting a list and members had to apply for a list with their autumn mailing. The main benefit for us was that we were in complete control of the publication of the list and the time window for the distribution itself. Hopefully members were happy with these new procedures. There was also a major saving on paper and ink (and potentially postage) in not printing 700+ copies for everyone, compared to the eventual 132 lists which were requested. There were 76 requests for an electronic version, again reducing the paper usage. We have not had any adverse comments so far. We had a total of 132 (158 in 2005 and 133 in 2004) requests, 91 (107 in 2005 and 99 in 2004) from the UK and 41 (51 in 2005 and 34 in 2004) from overseas, so it seems that we have not made it too difficult and put anyone off applying with our new procedures.

Each year we tweak the wording of our literature to intercept some misunderstandings that seem to creep in. But also it seems that some members do not read the information carefully enough. We had people sending stamps when requesting postal spore lists. This postage is borne by the Society and is not asked for on the form. We still have trouble with some overseas members having difficulty obtaining IRCs and ensuring that they are franked by their issuing office. We may be able to accept money using 'Paypal' or offering to have a contribution for the spore exchange as an add-on to their subscription in future.

We do have problems when members ask for 'your choice' or 'pot luck', for their alternatives. This not only puts us under pressure to guess what sort of things they might like, but could potentially lead us to give them a taxon that another member may specifically want, but may not get, because we had given this to an earlier requester as a 'pot luck' species. Please don't ask us to choose for you, or we might send you ten packets of bracken!!

Another slight problem is with some donations that have leaked out of their packets en route to us, or alternatively are so securely fastened with sticky tape that it's impossible to get at them. Occasionally virtually all the spores end up stuck to the tape, which is such a waste of the donor's efforts in collecting them for us. However, we are totally dependant on the donors for the success of the exchange, so please don't be offended if we give a little 'feedback' about your donation.

Thanks for all your support. Here's to the next one.

Following this report, Adrian Dyer made the point that the Spore Exchange organisers would probably require additional support in the future. Regarding the point about overseas postage, since this report was written, the committee have agreed that the Society will waive postage charges for overseas members as well as UK members.

Item 5c – REPORT OF THE PLANT EXCHANGE ORGANISER (Jonathan Crowe): Donor forms were distributed with the autumn 2006 mailing. The Plant Exchange List was compiled and distributed at the end of February 2007.

Statistics for taxa offered are shown below.

Status Code	Plant Status Description	No. in 2003	No. in 2004	No. in 2005	No. in 2007
Sp0	Sporeling less than 1 year old	3	10	0	0
Sp1	Sporeling 1-2 years old	8	13	15	13
Sp2	Sporeling 2-3 years old	10	13	15	7
Esp	Established plant	3	11	39	7
Bul	Bulbil	7	0	0	1
Rhs	Rhizomes	9	11	1	1
	Plant status not stated by donor	21	0	0	0
	Totals	**61**	**58**	**70**	**29**

The statistics for participants are shown below.

Category of Participant	**2003**	**2004**	**2005**	**2007**
Donors (also receive list of course)	8	6	8	7
List requesters	10	16	19	13
Exclusively with wants	16	8	-	-
Total Number of Participants	**34**	**30**	**27**	**20**

It can be seen that participation in the scheme continues to decline. A possible reason may be that the autumn mailing is not a good time to distribute donor forms. Next year (2008) the intention is to distribute the forms with the *Bulletin* mailing. This will allow donors a better chance to assess what they have available and for the Plant Exchange List to be distributed in the early summer, giving a more favourable season for growing and distributing plants. It is also intended to reintroduce the 'Wants' side of the scheme as a means of increasing interest.

Item 5d – REPORT OF THE BOOKSALES MANAGER (Frank Katzer): The major change for BPS Booksales has been that Steve Munyard has stepped down and I have taken over from him. The handover of the books took place at the beginning of October and since then I also have picked up the book collection of the late Trevor Walker, who bequeathed his books to the Society. I am in the process of cataloguing and pricing them and a list of available books will go out with one of the next mailings to members. The acquisition of second-hand and antiquarian ferns books at reasonable prices is becoming more difficult, as pointed out by Steve in the past. As a result, BPS Booksales relies more on bequeathed and donated books to

be able to offer fern books to BPS members at reasonable prices. With the next mailing I hope to provide more information about what services BPS Booksales is going to offer.

Following this report, Adrian Dyer thanked Frank for taking over Booksales.

Item 5e – REPORT OF THE MERCHANDISE MANAGERS (Bryan & Gill Smith): 2006 was another busy year for Merchandising, particularly as Gill took on the role of BPS Treasurer and Bryan concentrated on the Merchandise. We dealt with nearly 30 orders, which came mainly from the UK, but also as far afield as the USA, Canada, Australia, France, Belgium and Eire. Overall, intake amounted to over £1,300, somewhat less than the £2,000 for 2005. Details were available in the Merchandise accounts, with a summary in the Treasurer's account distributed.

So what was different in 2006? Well, probably the main reason for fewer sales is that Pat Acock kindly took over sales of Special Publications, which had been a big seller for us in 2005.

Mail order continues to be our main outlet for sales, but we did sell items face-to-face to members by making use of the AGM in Cambridge and at national meetings in Yorkshire in July, in Cornwall in September, and at the November 'Books' indoor meeting. We also sold items at our local East Anglia regional meeting, and colleagues in the north again sold a number of items at Southport Flower Show and at their North-West AGM.

Despite plans not to introduce any new items, we did trial John Mickel's US fern calendar, but with only limited success. Again, thanks to Anne Wright, we continued to add new varieties of her lovely fern greetings cards, including more designs of Christmas cards. The merchandise list that was distributed with the autumn mailing boasts some 17 ranges and a total of nearly 40 individual products. The list continues to be available through the BPS website, and we send out copies when we fulfil orders.

This year, we hope to add photographs of items to the website. If anyone has any ideas for ferny items they'd <u>really</u> like to see, please do let us know.

Following the report there was a brief discussion on the sales of the calendars produced by John and Carol Mickel for 2006 and 2007. For future years, consideration would be given to producing a BPS calendar.

Item 5f – REPORT OF THE HORTICULTURAL INFORMATION OFFICER (Matt Busby, read by Graham Ackers in his absence): I am pleased to report that I have been able to assist with four enquiries this year. The queries ranged from the identification of various ferns from photographs, the availability of spores, particular species for research and a response to an article published by me in the 2001 *Pteridologist*.

It should be noted that answers to such queries do not depend entirely on my grey matter but that within the Society, we have a wealth of knowledge and experience for me to draw on enabling me to answer any questions.

Item 5g – REPORT OF THE ARCHIVIST (Matt Busby, read by Graham Ackers in his absence): For the first time since the inception of the Society, we can now quickly retrieve from the Society's archive any material requested. This year, we received a request from a Warwickshire branch of the University of the Third Age (U3A), for colour-slides of the life history of a fern to illustrate a lecture on this subject by a member of the U3A. I am pleased to report that we received a letter of thanks from that branch complementing us on the excellent quality of the slides that we supplied.

Work on cataloguing the Society's slide collection is on-going and should be completed by the spring of 2007.

Item 5h – REPORT OF THE FERN VARIETIES NOMENCLATURE SUB-COMMITTEE (Matt Busby, read by Graham Ackers in his absence): Once again I must report that this subcommittee has not had any business since my last report for 2005. Unless some matters that require discussion present themselves during 2007, it is unlikely

that this subcommittee will meet. At present the subcommittee consists of Dr Alan Leslie, Martin Rickard and Matt Busby (convener).

Acceptance of the above reports (items 4c to 5h) was proposed by Frank McGavigan, seconded by Jennifer Ide, and approved by the meeting. Adrian Dyer pointed out that the above reports do not include those of the Regional Organisers, but we should recognise the importance of the regional activities to the membership. The regional meetings reports are, however, included in the *Bulletin*. Adrian thanked all of the Officers, Committee Appointees, and their respective helpers for their hard work during the year.

Item 6 – ELECTION OF OFFICERS, COMMITTEE & INDEPENDENT EXAMINER:

Having served his three-year term, Dr Adrian Dyer retired from the Presidency at this meeting. Mr Robert W. Sykes was proposed as the new President by Adrian Dyer and seconded by Yvonne Golding.

Both Mr Martin H. Rickard and Prof. Barry A. Thomas retired as Vice-presidents at this meeting having served their six-year terms. Mr Rob J. Cooke was proposed as a new Vice-president by Adrian Dyer, seconded by Alison Paul. Mr Mike S. Porter was proposed as a new Vice-president by Graham Ackers, seconded by Frank McGavigan.

All of the Officers will retire, but are available for re-election. They are – General Secretary Dr Yvonne C. Golding, Treasurer Mrs Gillian J. Smith, Membership Secretary Mr Mike G. Taylor, Meetings Secretary Mr Patrick J. Acock, Conservation Officers Dr Heather S. McHaffie and Dr Fred J. Rumsey, *Fern Gazette* Editor Prof. Mary Gibby, *Pteridologist* Editor Dr James W. Merryweather, *Bulletin* Editor Miss Alison M. Paul, Website Editor Mr Anthony C. Pigott.

Two of the longest serving Elected Committee Members who retired at this AGM were Mr R. Graham Ackers and Mr Bryan D. Smith, both having served since March 2004. On being elected President, Mr Robert Sykes resigned as an Elected Committee Member. The other committee members will also retire, but are available for re-election – Mr A.R. ('Matt') Busby, Dr Michael Hayward, Dr Sylvia D. Martinelli and Mr Frank McGavigan.

The following new Elected Committee Members were proposed:
Prof. John A. Edgington, proposed Yvonne Golding, seconded Martin Rickard.
Mr Roger Golding, proposed Adrian Dyer, seconded Yvonne Golding.
Mr Howard W. Matthews, proposed Pat Acock, seconded Alison Paul.
Mr Matt J. Stribley, proposed Bryan Smith, seconded Gill Smith.

All the nominees and those available for re-election as listed above were duly elected unanimously by the meeting [see the inside cover of this *Bulletin* for a full list of Officers and Committee].

Dr Nick J. Hards had agreed to be nominated by the Committee for re-election as Independent Examiner of the accounts. However, in view of Nick Hards' recent illness, Mr Alex Storie offered to act as a second Independent Examiner, and this offer was gratefully accepted by the meeting.

Adrian Dyer pointed out that it was proposed to change the status of some of the committee positions when the constitution is re-drafted. [See the report of the General Secretary in item 4a above for an account of some of these proposed changes.]

Item 7 – ANY OTHER BUSINESS

Robert Sykes thanked Adrian Dyer for his skill, enthusiasm and hard work during his three-year Presidency. He had stimulated people already in post and persuaded some new and excellent people to come on board – a vital skill in a Society with many facets, run entirely by volunteers. He had brought some additional clarity to our publications, meetings, and projects activities, and had established the new post of Project Officer. In concluding, Robert hoped that we would continue to enjoy his skill and congenial company in other roles.

Graham Ackers
Committee Secretary

BPS ACCOUNTS FOR 2006 & 2007

	2005	2006	2007
ORDINARY ACCOUNT			
INCOME			
Subscriptions	£15,654.55	£15,210.08	£15,485.05
Interest	£866.31	£991.68	£1,415.82
Booksales	£200.00	£988.89	£3,386.44
Merchandise	£377.76	£1,516.15	£827.85
Inland Revenue Gift Aid	£1,129.52	£1,428.88	£1,131.03
Donations	£50.00	£184.50	£243.00
Exceptional Items - Balances brought into Ordinary Fund as at 1 January 2006:			
Booksales		£433.43	
Merchandise		£878.57	
Other	£0.00	£0.00	£543.00
TOTAL INCOME	**£18,278.14**	**£21,632.18**	**£23,032.19**
EXPENDITURE			
Pteridologist	£3,601.95	£3,968.08	£3,946.30
Fern Gazette	£3,706.52	£4,190.63	£2,905.00
Bulletin	£3,340.13	£3,125.00	£0.00
Printing & Stationery	£444.24	£329.92	£12.28
Administration & Postage	£270.05	£511.20	£533.06
Subscriptions to Societies	£114.00	£96.00	£34.00
Plant & Spore Exchanges	£118.81	£47.31	£15.00
Meetings	£517.82	£45.14	£25.00
Merchandise	£494.37	£894.15	£723.26
Trustees' Expenses	£1,072.38	£1,064.40	£933.64
Archive Storage	£439.75	£352.56	£356.13
Booksales	n/a	£812.24	£1,749.31
Special Awards	n/a	£292.91	£0.00
Autumn Mailing	£508.51	£365.00	£530.00
Credit Card Costs	n/a	£117.85	£116.81
Computer Leasing	n/a	n/a	£267.20
Other	£0.00	£0.00	£828.00
TOTAL EXPENDITURE	**£14,628.53**	**£16,212.39**	**£12,974.99**
Balance (income minus expenditure)	**£3,649.61**	**£5,419.79**	**£10,057.20**
Brought Forward from previous year	**£20,170.66**	**£23,820.27**	**£29,240.06**
Total in Ordinary Account	**£23,820.27**	**£29,240.06**	**£39,297.26**
CENTENARY FUND (Restricted Account)			
Interest	£291.17	£294.36	£342.09
Interest brought forward from previous year	£1,195.72	£1,486.89	£1,481.25
Grant	£0.00	£300.00	£0.00
Total Interest	**£1,486.89**	**£1,481.25**	**£1,823.34**
Capital brought forward from previous year	£5,583.73	£5,583.73	£5,583.73
Total in Centenary Fund	**£7,070.62**	**£7,064.98**	**£7,407.07**

GREENFIELD FUND (Restricted Account)

Interest	£98.17	£99.24	£120.23
Interest brought forward from previous year	£1,234.63	£1,332.80	£1,432.04
Grant	£0.00	£0.00	£0.00
Total Interest	**£1,332.80**	**£1,432.04**	**£1,552.27**
Capital brought forward from previous year	£1,051.00	£1,051.00	£1,051.00
Total in Greenfield Fund	**£2,383.80**	**£2,483.04**	**£2,603.27**

PUBLICATIONS ACCOUNT

Brought forward from previous year	£8,077.45	£6,687.89	£6,678.84
Income	£2,704.27	£2,439.72	£1,914.73
Interest	£346.92	£278.43	£323.39
Expenditure	£4,440.75	£2,727.20	£166.13
Total in Publications Account	**£6,687.89**	**£6,678.84**	**£8,750.83**

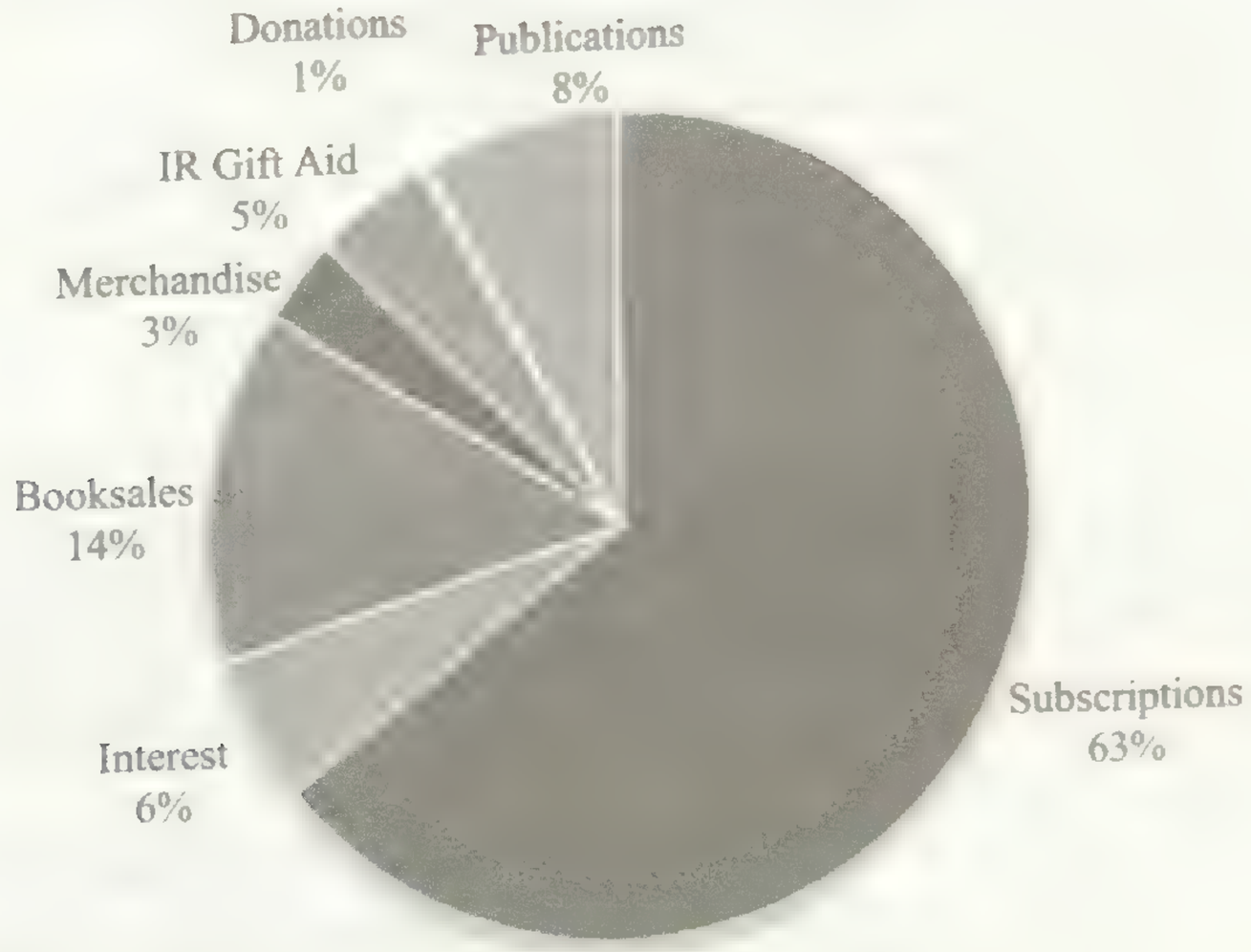
TOTAL FUNDS FOR YEAR ENDING 31 DECEMBER 2007

Ordinary Account	£39,297.26
Centenary Fund	£7,407.07
Greenfield Fund	£2,603.27
Publications Account	£8,750.83
Total Funds	**£58,058.43**

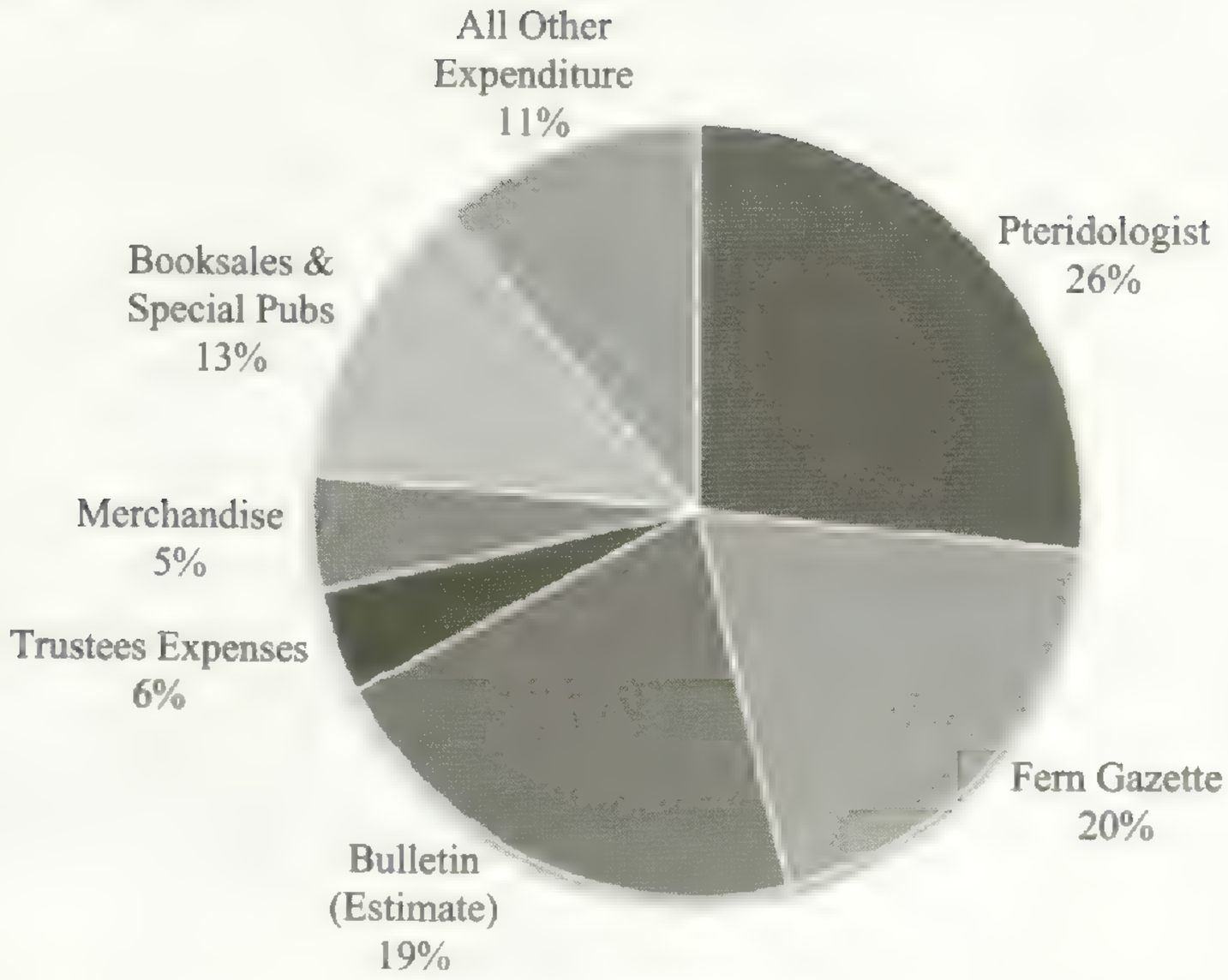
REPRESENTED BY

Charitable Organisations Investment Fund	£40,926.92
Bank of Scotland & Others	£17,131.51
Total Funds	**£58,058.43**

INCOME 2007



EXPENDITURE 2007



NOTES TO THE ACCOUNTS

1. The accounts reflect the subscriptions actually received in the year.
2. National Savings and Investment terminated their Treasurer's account in August 2007. After some deliberation, BPS Committee decided to hold a large portion of their funds in the Charitable Organisations Investment Fund. Favourable reports of this fund had been received from other charities – at the present time, interest of 5.88% was being paid out.
3. The Society possesses the following stock:
   Back issues of the *Bulletin*, *Fern Gazette* and *Pteridologist* valued at approximately £1,500.
   Merchandising valued at approximately £2,000 & capital of £1,385.75
   Booksales – new and second-hand books valued at approximately £5,814 & capital of £2,775.88.
   FSC Key to Common Ferns – 25 valued at £38
   BPS Special Publications – Title (no. copies) valued at:
   - Fern Names and their Meanings (91) £410
   - Cultivation and Propagation (255) £1,275
   - History of British Pteridology (745) £1,863
   - BPS Abstracts & Papers (379) £947
   - CD Rom – BPS Minute Book (7) £70
   - Polystichum Cultivars (85) £1,063
   - New Atlas of Ferns (70) £630
   - Fern Books Before 1900 (397) £5,565
4. Full details of Merchandise and Booksales Accounts can be obtained from the Managers.
5. The Society decided to split the two Restricted Funds into 'Capital' and 'Interest'. The 'Interest' section of the Funds is available for payment as grants.
6. A grant of £300 was made from the Centenary Fund in 2006 to Ken Trewren to investigate fern hybrids in Ireland (see 2006 *Bulletin* 6(5): 433). No grants were made in 2007.
7. Computers for specific BPS officers use are being leased from Dell Computers. In 2007, the Treasurer and the *Bulletin* Editor were recipients of such machines.
8. It was decided in committee during 2007 that the accounts published in the *Bulletin* were too far behind the year that they represented. Therefore accounts for 2005, '06 and '07 are presented for comparison in this one 'catch-up' issue. Also for this reason, the invoice for the printing of the 2007 *Bulletin* is NOT included in this one 2007 issue of the accounts, but it will appear in the 2008 accounts and yearly thereafter.

Gillian Smith, Treasurer

ACCOUNTS FOR THE YEARS ENDING 31 DECEMBER 2006 AND 31 DECEMBER 2007

I have examined the accounting records maintained by the Treasurer of the British Pteridological Society. I can certify that the accounts presented to me are in accordance with the books and records.

Alexander Storie AIB Scot., Independent Examiner, 27 February 2008

REPORTS OF OFFICERS & COMMITTEE APPOINTEES FOR 2007

In this issue of the *Bulletin*, we are doing things a little differently in that the reports for 2007 are being published now. This is mainly to give more currency to the reports, rather than having them published as part of the AGM minutes, when they are over a year out of date. We hope that this will be more helpful to the majority of members who do not attend the AGM and therefore cannot hear the reports when they are current. For those members who do attend the AGM, it allows us the possibility of shortening proceedings by restricting the reports session to one of questions and answers, although this will be up to the President at the time. A Q&A session will of course require AGM attendees to have read these reports first; please bring a copy of this *Bulletin* to the meeting. Another reason for bringing the *Bulletin* is that it also contains AGM minutes and reports from 2006, and conventionally these are 'approved' by AGM attendees. We hope that members will prefer this new reporting system; if successful, the next *Bulletin* will only have the reports for one year, not two as in this changeover edition.

Graham Ackers, Committee Secretary

GENERAL SECRETARY – Yvonne Golding

2007 has been another busy year for the BPS committee. We met in January in London at the Natural History Museum (NHM); we had our AGM in Edinburgh; the committee met again in May, this time in Manchester, and were back in London for our October meeting. We have welcomed four new members onto our committee – John Edgington, Roger Golding, Howard Matthews and Matt Stribley, together with our new President, Robert Sykes.

This year we have re-written our constitution, a task that took much longer than we originally anticipated! There were many clauses that had to be changed to reflect our current situation and to make our Society more compatible with Charity Law. Importantly, we have changed the wording of the Objects, which we now think better describe the wide-ranging activities of our Society. We have had a heated debate about whether we should change the name of our Society. For the moment we are leaving it as British Pteridological Society but we have agreement that we should use a qualifying strap line along the lines of 'the society for fern enthusiasts' wherever possible. We will finalise the constitutional changes at our committee meeting in January 2008 and ask for a vote on the new constitution at the AGM at the NHM in London on 5th April 2008.

Following the successful indoor meeting at Wisley in November, a small working group met (on the Sunday!) to discuss the future direction of the BPS and to try and come up with an achievable three-year plan. These Planning Meetings, a relatively new initiative, are held every three years during the first year of a new Presidency. Such meetings enable key members of the committee to discuss strategic issues unencumbered by routine committee business. One of the main topics identified for discussion was the desire to raise the profile of the BPS, both to attract new members and also to engage more with the general public, which is our statutory duty as a charity. We have come up with some ideas, which we are actively pursuing. Other issues discussed were education about ferns, both for our members and the public, what else we can provide for gardeners and how we can expand our regional groups to cover the whole of the UK.

One of the downsides of the year's end is marked by the retirement of some of our hard-working officers. We say goodbye to James Merryweather who has done a splendid job in editing ten issues of *Pteridologist*, the last six of which were in full, glossy colour and very professionally done. Patrick Acock retires after ten very productive years as Meetings Secretary, organising full programmes of trips (which he almost always attended) up and down the country and abroad. Barry and Anne Wright are retiring as Spore Exchange

Organisers; they too have provided this very popular service to members both in this country and abroad for ten years. We shall miss them in their roles but hope they will all remain active BPS members. Our Society is run entirely by volunteers who work on behalf of our members and I would like to thank all of them for their hard work throughout the year.

MEMBERSHIP SECRETARY – Mike Taylor

Last year we reported a worrying decline in membership numbers from 793 in 2005 to a disappointing 746 at the end of 2006. Unfortunately, this year the number has continued to decline, although to a lesser extent. We now have a total of 727 members, made up of 597 Ordinary, 28 Complimentary, 6 Honorary, 14 Student and 82 Subscribers; of the 'Ordinary' members, 89 choose not to take the *Fern Gazette*.

Most of the new members we have recruited this year found out about us via an internet search, and our website is absolutely vital in both recruiting and retaining our membership. A small proportion said that a friend or colleague had passed on information about the Society and I would urge all members to help to recruit new members, after all at £20 for a year's membership it is extremely good value. We have 65 members who pay via the American Fern Society; however, I have been informed by George Yatskievych that due to the weak dollar he expects that figure to drop in 2008.

The amount recovered in Gift Aid was almost the same as last year: £1,131 this year as against £1,118 in 2006. However, the changes made to income tax in the 2007 budget mean that we will receive less in future years unless more members sign the Gift Aid form. The Society has benefited by £4,960 since we first started claiming Gift Aid.

Finally, I received an e-mail from someone asking me to remind members of the importance of putting the 'e' in our eBPS e-mail addresses. He forgot and got the British Psychological Society!

MEETINGS SECRETARY – Pat Acock

Another full programme and another enjoyable year thanks to our hard-working meetings committee. Reports are in this issue of the *Bulletin*. Some complaints were voiced concerning the fact that only one meeting was organised before August. At the planning meeting we always strive for a balanced programme, but as we negotiated with leaders, changes came about either through their preferred dates, when particular ferns were at their best, or the sudden need for a leader to switch dates after the other meetings were set.

All meetings were superbly led and were most interesting for a wealth of different reasons. Attendance was especially good at Edinburgh, North Wales, Derbyshire, Lincolnshire and Wisley. Numbers of British participants were down in Texas at our regular joint meeting with the Hardy Fern Foundation and on our short foray to France. However, this did not detract from the enjoyment. It is by attending these meetings that we really get to know each other better and also exchange ideas and bring newer enthusiasts into the fold.

I would like to thank our regional organisers who do an excellent job fitting local meetings amongst the national ones. I would also like to remind members that they are most welcome to contact regional secretaries for a programme whether they live in the area or plan to be visiting; some programmes are available on the website.

We would like to extend our regional meetings to places devoid of them at the moment, such as Wessex, the Midlands, Wales, Ireland and Northumberland. When Paul Ripley and I were asked to become involved in the South-East meetings, we were helped by Clive Jermy for year one. We soon got the idea and have continued for the last twenty plus years. You need only offer one meeting in the first year to get a group started and help would be at hand with who to contact and how to plan a meeting. Basically it would be down to you as to what type of meeting to hold. As the group grows new ideas would come from those attending. Do feel free to contact me for help either by e-mail or regular mail.

CONSERVATION OFFICER – Fred Rumsey

Working with Heather and me and other individual members, the Society's local groups have, during the course of the year, provided valuable monitoring data for the conservation agencies on several threatened fern species. We hope to integrate such actions more fully in future meetings programmes. During the year one previously overlooked native taxon (*Lycopodium lagopus* syn. *L. clavatum* subsp. *monostachyon*) has been added to the British list through herbarium study and confirmed as still present in two sites by Society members. Even more excitingly, a novel species of *Polypodium* has been discovered on a BPS trip and will be described shortly in the *Fern Gazette*.

I continue to contribute to the UK Biodiversity Action Plan review process and am advising on the DEFRA consultation on non-native species. Invasives have a potentially profound effect on our flora and most arise as garden escapes; their study and documentation is thus of some importance. Proposed legislation may, however, make illegal the sale and distribution of what are considered potentially damaging organisms, which could impact the Society's members; a watching brief is being maintained. Advice continues to be given on conservation issues relating to pteridophytes when requested.

RECORDING OFFICER – Fred Rumsey

I am very grateful to the many members who have helped contribute records this year and it is pleasing to document the discovery of new species and hybrids to the British Flora made as a result of members' actions. I would like to thank Frank McGavigan and the others who have helped redesign and road-test new recording cards and it is hoped that versions of these can soon be made generally available on request. Anthony Pigott and I have been in contact with the Botanical Society of the British Isles with regards to how we might mutually benefit with regards to recording matters. They have a nationwide network of recorders feeding into national recording schemes that ultimately give out publicly accessible data as well as providing detailed monitoring data to the conservation agencies. We will outline in publications later this year how we as a Society can contribute to these important activities and the potential benefits to members of doing so. It is hoped that recording will become more widely embraced within the Society and better integrated into our field meetings. Your expertise and knowledge is important and should not be overlooked!

PUBLICATIONS SECRETARY – Martin Rickard

The *Fern Gazette*, edited by Mary Gibby and Andrew Leonard and the *Bulletin*, edited by Alison Paul, are both in good hands (see their individual reports for further information). Special Publications are selling well with the *Fern Atlas* (2005) and *Polystichum Cultivars* (2005) leading the way. *Fern Books*, published in 2006, sold slowly initially but advertising has helped boost sales recently. This is an incredible run of publications for our small Society.

***FERN GAZETTE* EDITOR – Mary Gibby**

Volume 18 Part 2 is practically complete and just awaiting feedback on proofs. There is plenty of copy for Part 3.

***BULLETIN* EDITOR – Alison Paul**

The 2007 *Bulletin* is another bumper issue of 84 pages and also includes a revised membership address list. Having a BPS laptop has helped considerably, although getting to grips with newer versions of Microsoft Word has been a steep learning curve!

The committee discussed the subject of including some colour photographs, an issue that was raised at the AGM in Edinburgh, and a quotation for colour printing was obtained. It was agreed that colour could be used at the Editor's discretion. I have not taken advantage of this for the current issue, primarily for logistical reasons.

PTERIDOLOGIST EDITOR – Martin Rickard

After two spells as Editor, James Merryweather has finally retired. He has brought the publication a long way with the introduction of colour, the large paper format and slick editing techniques. We thank him for all his hard work. His is going to be a tough act to follow. Fern knowledge and editing skills are an unlikely combination. Fortunately Alec Greening has these skills and has agreed to handle that side of things, so he and I will work together for the next two issues. After that we will review the situation.

It is hoped to bring publication forward to May or June each year hence the deadline for copy in future will be January 31st. Copy received after this date might be squeezed in but it is more likely to be held over.

WEBSITE EDITOR – Anthony Pigott

The website continues to develop, both with the usual updates of BPS information, such as meetings programmes, spore lists and publications and new features such as news of changes in conservation priority of fern species and on-line publication of the AGM minutes. The home page has continued to evolve, especially to enable visitors to quickly access new information.

The website has now completed its transformation to the new more contemporary style with the last of the 1997 vintage layouts disappearing. There has been a complete revision of the pages that describe the organisation, services and activities of the BPS. The old navigation structure has been replaced with a new one that is hopefully easier to use and will enable natural expansion of website content for some time to come.

Technical problems, out of our control, at the beginning of the year have had lasting knock-on effects delaying progress. The website editor has more recently lost significant amounts of time due to family illness, which has further held up development.

For over ten years, the editor has run the website almost single-handedly and additionally prepared most of the content. We are now actively looking at how more people can be involved in the development and running of the website and at how the website itself can be best structured to facilitate that. The website will be increasingly important to the BPS and it is now time to start to move to a situation where the editor spends rather less time and others spend much more.

The outlook for the coming year includes the prospect of much more information on recording and distribution, a start to putting the journal back numbers on-line and a guide to where to see ferns in the wild. As always, offers of contributions and other help are extremely welcome.

PROJECT OFFICER – Anthony Pigott

A project is an activity with a defined objective, timescale and participants. It is a one-off activity to achieve a specific goal rather than one of the more usual regular activities of the Society. We now have three main projects underway:

Recording & Mapping. This project will implement a number of items all aimed at increasing the participation of the BPS in the recording and analysis of pteridophyte distribution in Britain and Ireland. This will include encouraging members to make records and working with the BSBI to facilitate the input of new data and access to existing records.

On-Line Journals. The BPS has decided to make back numbers of its journals available on-line. There is a tremendous wealth of pteridophyte knowledge in those pages which is currently difficult to access and search. This project will look at the technical and administrative issues involved, leading to effective implementation.

Website Development. We see the website as being of increasing importance to the BPS and the way it communicates with its members and the public. This project will identify and implement ways to get more people involved and to make the website easier to expand and develop.

SPORE EXCHANGE ORGANISER – Anne Wright

The Spore Exchange is a popular part of the Society's activities. In 2007, 113 requests were received and processed. Of these, 81 were from UK members and 32 from overseas, reaffirming the international nature of our exchange. The overseas requests were from Australia 2, Austria 2, Belgium 3, Canada 1, Denmark 2, Estonia 1, Finland 1, France 1, Germany 5, Hungary 1, Latvia 1, Luxembourg 1, Mauritius 1, Netherlands 2, Spain 1, Sweden 1, USA 3, Thailand 1 and Kenya 1.

I am always extremely grateful for donations, but I still receive a small number of donations that prove to contain either no spores at all or so few spores that I cannot list that taxon. This is made worse by the knowledge that the donor would have spent a considerable time collecting what they believed to be an adequate donation of spores. I hope that donors will not be offended if I let them know of any problems with their donations. If there are any queries about donating spores, please feel free to e-mail me at spores(*a* eBPS.org.uk and I will do my best to help. May I also make a heartfelt plea that species names etc. are written very clearly in capital letters – it can take a considerable amount of time to look up all the possible permutations on the internet!

It remains only to say thank you to the loyal band of donors, without whom we would not have this valuable service.

PLANT EXCHANGE ORGANISER – Jonathan Crowe

Participation in the scheme has been declining. A possible reason may be that the Autumn Mailing 2006 was not a good time to distribute donor forms. For 2008 the intention is to distribute donor forms with the Bulletin mailing. This will allow donors a better chance to assess what they have available and for the Plant Exchange List to be distributed in the early summer, giving a more favourable season for growing and distributing plants.

The 'Wants' side of the scheme will be reintroduced as a means of increasing interest. It will be possible to indicate wants on the donor form for inclusion in the Plant Exchange List distributed to participating members.

BOOKSALES ORGANISER – Frank Katzer

This has been a very busy year for BPS Booksales, with sales of over £3,000. This is partially due to the bequest of the fern book library from the late Trevor Walker at the end of 2006. This led to a very busy Booksales stand at the AGM in Edinburgh. I am very grateful to Yvonne Golding who has taken books for me to other BPS meetings that I could not attend and this has led to many more sales. New books have also become a very important contribution to BPS Booksales as it becomes ever more difficult to obtain fair-priced second-hand fern books. The increased cost of postage has also become almost prohibitive, making meeting sales ever more important. The task of Booksales has proved to be far more demanding this year than I initially thought and my responses have not always been as fast as I would have liked them to be. This is mostly due to my move to a new research institute in June and even more recent changes in my new job, which has made it very difficult for me to find time to devote to BPS Booksales. Hopefully this has not resulted in too long delays in response to requests. I hope that I will be able to spend more time on BPS Booksales in the coming year.

MERCHANDISE ORGANISERS – Bryan & Gill Smith

Unusually, 2007 was not as successful as previous years for Merchandising, though we can glean no particular reasons for this. We had only three mail orders (which came from the UK and Italy), compared with nearly 30 in 2006 (which came from the UK, USA, Canada, Australia, France, Belgium and Eire). So, face-to-face selling became our mainstay this year. We sold merchandise at the AGM in Edinburgh, at national meetings in Wales (August), the Peaks (September), Lincoln (September) and at the Wisley fern cultivars

meeting (November). For the national meetings, we gave attendees the option to pre-order items. Colleagues in the north, as before, sold merchandise at the Southport show (August), and at the AGMs of the Yorkshire Regional Group and the North-West Regional Group. Overall, sales amounted to just over £600, about half of the £1,300 for 2006. Further details can be found in the Merchandise section of the Treasurer's accounts.

The current merchandise list (September 2007), which was distributed with the autumn mailing, boasts some 17 ranges and a total of nearly 40 individual products. The list continues to be available through the BPS website, and we send out copies when we fulfil orders. This year we hope to add photographs of items to the website. If anyone has any ideas for fernу items they would <u>really</u> like to see and that they think other members would also like to buy, please do let us know.

HORTICULTURAL INFORMATION ADVISER – Matt Busby

I have nothing to report this year. My file of cases has remained empty throughout 2007. The only queries that I have received is for speakers to give talks to societies on ferns and fern growing. This is largely due to my name remaining on speaker registers in spite of having retired from giving talks two years ago. The Committee is considering compiling a register of members who are able and prepared to give talks to gardening societies.

ARCHIVIST – Matt Busby

During 2007, items from the Archive have been supplied to the journal *British Wildlife* and to various members of the Society. Work on cataloguing the Society's slide collection has been completed. It numbers some 1,400 slides. Consideration is being given to digitising some of the most valued slides.

FERN VARIETIES NOMENCLATURE SUBCOMMITTEE – Matt Busby

As in previous years, this subcommittee has remained inactive due to lack of business. The subcommittee consists of Dr Alan Leslie, Martin Rickard, and me as convener.

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photo: Y.C. Golding

Chris Page (*left*) being presented with Honorary Membership certificate by President Adrian Dyer at RBGE

AWARDS

HONORARY MEMBERSHIP – CHRISTOPHER N. PAGE

During 2007 Honorary Membership was conferred on Chris Page for his services to pteridology.

Christopher Nigel Page (born 1942) has had a lifelong interest in ferns and horsetails, which began by collecting fossils of them in the Forest of Dean. He went to Durham University to study geology but once there met Dr Trevor Walker and subsequently transferred to Botany, graduating with First Class Honours in 1964. He went on to investigate evolution in *Equisetum* for his PhD under the supervision of Trevor Walker.

Almost immediately, Chris took up a post-doctoral Fellowship at the University of Queensland in Australia during which time he travelled widely, carrying out fieldwork in Africa and Australasia. Following a brief interval as a Demonstrator at Oxford, he was appointed in 1971 to the staff at Royal Botanic Garden Edinburgh (RBGE). He initiated a programme of research, working on pteridophytes and gymnosperms for the next 25 years and travelling extensively through Asia and the Pacific.

Chris joined the BPS in 1965, having already published a paper in *The Fern Gazette* in 1963. He was on the Committee from 1970-1985 and a Vice-President from 1985-1990. He edited *The Fern Gazette* for ten years from 1974. During the 1970s and 1980s, he was very active on BPS field meetings and also recruited a lot of new members through his Field Studies Council courses at Slapton (Devon) and Kindrogan (Perthshire). He has published many articles in the *Pteridologist*, particularly on fern photography. He was co-organiser of the highly successful international fern conference *The Biology of Pteridophytes* held in 1983 at RBGE, initiated by Adrian Dyer and sponsored by the BPS, the Linnean Society and the Royal Society of Edinburgh. Chris was co-editor of the subsequently published Proceedings (*Biology of Pteridophytes*. Eds A.F. Dyer & C.N. Page. Proc. Roy. Soc. Edin., Series B, Vol. 86.)

He is likely to be best known to BPS members as the author of two influential books: *The Ferns of Britain and Ireland* (CUP, 1982; 2nd Edition 1997) and *A Natural History of British Ferns* (Collins New Naturalist, 1988). The first of these has been in continuous sales for 25 years and CUP are planning a celebration for Chris. In these books he has made available some of his encyclopaedic knowledge of British species and their hybrids, their morphological variation, their distributions and natural and man-made habitat preferences and their associated species. His wide interests and experience enable him to place the British flora in the context of its evolutionary history and geology. In addition to more than 100 papers, other pteridological publications include contributions to several Floras, including *The European Garden Flora* (CUP, 1986) and compendia such as *The Changing Wildlife of Britain and Ireland* (Systematics Association, 2001), *The Evolution of Plant Physiology* (Linnean Society, 2004), and *Botanical Links in the Atlantic Arc* (BSBI, 2006). In 2002, he published in *Review of Palaeobotany and Palynology* a sequel to an influential earlier paper: "The diversity of ferns: an ecological perspective" (in *The Experimental Biology of Ferns*, Academic Press, 1979).

In retirement Chris continues to advise and write about ferns and has established a new fern garden in Cornwall. His main pteridological objective remains the promotion of the scientific study of fern ecology. He sees fern taxonomy as the necessary means to that end.

A.F. Dyer & H.S. McHaffie

Honorary Membership – John T. Mickel

During 2007 Honorary Membership was conferred on John Mickel for his services to pteridology.

In the world of ferns, few, if any, have contributed so much to scientific pteridology AND fern horticulture. John has been a member of the British Pteridological Society for over 30 years, and despite residing in New York State, regularly supports symposia on ferns organised here in Britain.

photo: Carol Mickel

Alan Smith and John Mickel

John has studied ferns at the New York Botanical Garden herbarium since 1969 and continues in retirement to work on the large and complex genera *Elaphoglossum* and *Anemia.*

I suspect he will be best known to BPS members for his frequent contributions to journals worldwide and of course his books. He has contributed greatly to our knowledge of the ferns of North and Central America. With the late Joe Beitel he wrote the *Pteridophyte flora of Oaxaca*, and more recently, still in Mexico, he and Alan Smith produced the hugely impressive *Pteridophytes of Mexico*. John organised several pteridological tours of Mexico, one was famously written up by Oliver Sachs as the very entertaining *Oaxaca journal*. He organised two fern workshops in Trinidad and put together a very useful guide to the ferns of that island. Years later this book served as an indispensable identification guide for the BPS excursion in 2004. For my part I always use his *How to know the ferns and fern allies* when trying to identify a North American fern. His books are easy to use and, more important, trustworthy.

There is really no excuse for any one interested in ferns not knowing the name of Mickel. He has done much for fern gardeners too. His *The home gardener's book of ferns* and more recently *Ferns for American gardens* have opened new horizons for fern growers both in the USA and in Europe. In addition, from 1973 until 1995 he edited the American Fern Society's *Fiddlehead Forum*, frequently with the help of his wife Carol.

I once asked him how many books had he written He guessed "about 20", so you can see, I have only scratched the surface here.

John and Carol's garden in New York State is a delight. It is immaculate and full of a very large collection of often very unusual ferns, all beautifully grown. Moving into his house you will not escape the fern influence. If you have a chance to look around when not being treated to the famous Mickel hospitality, you will see fern memorabilia everywhere. Virtually everything is adorned by a fern motif! Towels, carpets, serviettes, crockery, glass, seats, pictures, etc. Last but not least, John's car number plate probably sums him up: 'FERNMAN'!

Martin Rickard

Honorary Membership – Alan R. Smith

During 2007 Honorary Membership was conferred on Alan Smith for his services to pteridology.

Dr Alan R. Smith has long been considered one of the most competent and experienced pteridologists working with the Neotropical fern flora. Since 1969 he has been Curator and Research Botanist at the Herbarium of the University of California, in Berkeley, USA. He was born in Sacramento (CA) in 1943, obtained his BS Degree in Botany in 1965 from the Kansas State University, and earned his PhD in 1969 at the Iowa State University, as a student of Dr John T. Mickel (currently retired from NYBG). After falling in love with ferns in Costa Rica while participating in a course in tropical pteridology, Alan worked on the pteridophytes of many Neotropical countries, collaborating in floristic research on the ferns of Mexico, Central America, Venezuela, Ecuador, Peru, Bolivia and the Guianas, or providing generic treatments in several important families (such as Thelypteridaceae, Grammitidaceae and Polypodiaceae). In 1993, he was co-editor and advisor for the volume on pteridophytes for the *Flora of North America North of Mexico*. He was co-author with John Mickel of the 'ferntastic' work *Pteridophytes of Mexico* (2004), more than 1,000 pages taking into account recent results on the systematics and phylogeny of ferns.

Recently, he has been involved in phylogenetic research on relationships of the basal ferns and on the aforementioned families, in collaboration with many other pteridologists (Robbin Moran, Kathleen Pryer, Paul Wolf, Tom Ranker, Chris Haufler, Harald Schneider, Jean-Yves Dubuisson, Ray Cranfill, Dave Des Marais, Eric Schuettpelz, Andy Murdock, and others). This work led to the recent (2006) publication of an important paper in *Taxon*, on 'A classification for extant ferns', and more recently (*Taxon*, 2006) on a revision of a group of Neotropical *Polypodium* relatives.

He has described and participated in the description of six new fern genera, and has authored or co-authored about 560 combinations involving new species, subspecies, varieties and hybrids. Seven taxa have been dedicated to him and bear his name.

In addition, Alan Smith has been President of the American Fern Society and Editor of the *American Fern Journal*.

With his broad knowledge, not only of American and Neotropical ferns but also of ferns from other parts of the world, Alan has always been ready to help pteridologists with questions and discussions of taxonomic issues. Members of the BPS who have been in touch with him can bear witness to this. His kindness, his breadth of knowledge, and his rapid response to e-mails with clear and precise answers are much appreciated in furthering progress on fern systematics.

Michel Boudrie

IN MEMORIAM

We were sorry to learn of the death of the following members (date joined BPS in brackets):

Dr Donald Carmichael of Devon (1997)

Dr Robert Finch of Cambridge (1968)

Mr Alf Hoare of Hertfordshire (1969). An obituary will be published in the 2008 *Bulletin*.

Mr Wallace Fyfe of Isle of Bute (1998). An obituary will be published in the 2008 *Bulletin*.

MEETINGS PROGRAMME 2008

Meetings Secretary: P.J. Acock
Meetings Subcommittee: M.H. Rickard, N.J. Hards, J.M. Ide, R.J. Cooke, P.H. Ripley

Thurs. 14 - Thurs. 28 Feb.	**Overseas Field Meeting – Costa Rica** Leader: Klaus Mehltreter
Sat. 5 April	**AGM & Spring Indoor Meeting – *Presentations on fern distribution and ecology of La Réunion, Texas & Costa Rica* – Natural History Museum, London** Leader: Pat Acock
Fri. 18 - Fri. 25 April	**Overseas Field Meeting – Madeira** Leader: Pat & Grace Acock
Sat. 14 - Sun. 15 June	**Weekend Field Meeting – South Wales** Leader: Pat Acock
Sat. 26 - Sun. 27 July	**Weekend Field Meeting – SW of Dumfries, Scotland** Leader: Frank McGavigan
Thurs. 21 - Sun. 24 Aug.	***Southport Flower Show: BPS Stand** Further Info.: Michael Hayward
Sat. 20 - Sun. 21 Sept.	**Weekend Field Meeting – Swanage, Dorset** Leaders: Ted Pratt
Sat. 1 Nov. ***NOTE CHANGE OF DATE***	**Autumn Indoor Meeting – *Focus On Spleenworts* – Natural History Museum, London** Leader: Pat Acock

** Event supported by, but not organised by, the BPS.*

For further details of these and other meetings of interest to members, including information on accommodation, please see the separate Meetings Programme sheet. This can be sent to overseas members on request and is also available on the BPS website.

REGIONAL MEETINGS

Please note: Regional group meetings are open to all members, so if you are travelling through or holidaying in one of the following areas area you would be very welcome to join in. For details of meetings please see the BPS website or contact the regional organisers by e-mail, or by post enclosing a stamped addressed envelope.

Yorkshire	Bruce Brown, 4 Bank Parade, Otley, West Yorks. LS21 3DY e-mail: Yorkshire@eBPS.org.uk
South-East England	Paul Ripley, 2 Station Villas, Station Road, Appledore, Ashford, Kent TN26 2DF; e-mail: SouthEast@eBPS.org.uk
East Anglia	Tim Pyner, 182 Southchurch Boulevard, Southend-on-Sea, Essex SS2 4UX; e-mail: EastAnglia@eBPS.org.uk
North-West England	Peter Campion, Lake View, Castle Hill, Bassenthwaite, Keswick, Cumbria CA12 4RG; e-mail: NorthWest@eBPS.org.uk
Cornwall	Matt Stribley, 8 St George's Road, Truro, Cornwall TR1 3JE e-mail: Cornwall@eBPS.org.uk
Scotland	Frank McGavigan, 12 Glenbank Avenue, Lenzie, Glasgow G66 5AA e-mail: Scotland@eBPS.org.uk

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